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REPORT OF THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT*

(Rio de Janeiro, 3-14 June 1992)

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* The present document is a preliminary version of the report of the United Nations Conference on Environment and Development and is being issued in five volumes. The Rio Declaration on Environment and Development and section I (Social and economic dimensions) of Agenda 21 are in volume I; section II (Conservation and management of resources for development) of Agenda 21 is in volume II; and sections III (Strengthening the role of major groups) and IV (Means of implementation) of Agenda 21 and the non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests are in volume III. The proceedings of the Conference and opening and closing statements are in volume IV. Statements made during the Summit Segment are in volume V.

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a/ The present volume contains the preamble and section I (Social and economic dimensions); for section II (Conservation and management of resources for development), see A/CONF.151/26 (Vol. II); for section III (Strengthening the role of major groups) and section IV (Means of implementation), see A/CONF.151/26 (Vol. III).

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ABBREVIATIONS

APELL	Awareness and Preparedness for Industrial Accidents at Local Level
CFC	chlorofluorocarbon
CGIAR	Consultative Group on International Agricultural Research
CILSS	Permanent Inter-State Committee on Drought Control in the Sahel
EEZ	exclusive economic zone
ECA	Economic Commission for Africa
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ELCI	Environmental Liaison Centre International
EMINWA	environmentally sound management of inland water
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
FAO	Food and Agriculture Organization of the United Nations
GATT	General Agreement on Tariffs and Trade
GAW	Global Atmosphere Watch (WMO)
GEF	Global Environment Facility
GEMS	Global Environmental Monitoring System (UNEP)
GEMS/WATER	Global Water Quality Monitoring Programme
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Pollution
GIPME	Global Investigation of Pollution in the Marine Environment (UNESCO)
GIS	Geographical Information System
GLOBE	Global Legislators Organisation for a Balanced Environment
GOS	Global Observing System (WMO/WWW)
GRID	Global Resource Information Database
GSP	generalized system of preferences
HIV	human immunodeficiency virus
IAEA	International Atomic Energy Agency
IAP-WASAD	International Action Programme on Water and Sustainable Agricultural Development
IARC	International Agency for Research on Cancer
IBSRAM	International Board of Soil Resources and Management
ICCA	International Council of Chemical Associations
ICES	International Council for the Exploration of the Sea
ICPIC	International Cleaner Production Information Clearing House
ICSC	International Civil Service Commission
ICSU	International Council of Scientific Unions
IEEA	integrated environmental and economic accounting
IFAD	International Fund for Agricultural Development
IGADD	Intergovernmental Authority for Drought and Development
IGBP	International Geosphere-Biosphere Programme (ICSU)
IGBP/START	International Geosphere-Biosphere Programme/Global Change System for Analysis, Research and Training
ILO	International Labour Organisation
IMF	International Monetary Fund

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IMO	International Maritime Organization
INFOTERRA	International Environment Information System (UNEP)
IOC	Intergovernmental Oceanographic Commission
IPCC	Intergovernmental Panel on Climate Change
IPCS	International Programme on Chemical Safety
IPM	integrated pest management
IRPTC	International Register of Potentially Toxic Chemicals
ITC	International Tin Council
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature and Natural Resources
MARPOL	International Convention for the Prevention of Pollution from Ships
OECD	Organisation for Economic Cooperation and Development
PGRFA	plant genetic resources for agriculture
PIC	prior informed consent procedure
SADCC	Southern African Development Co-ordination Conference
SARD	Sustainable agriculture and rural development
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNDRO	Office of the United Nations Disaster Relief Coordinator
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNU	United Nations University
WCP	World Climate Programme (WMO/UNEP/ICSU/UNESCO)
WFC	World Food Council
WHO	Whold Health Organization
WMO	World Meteorological Organization
WWF	World Wild Fund for Nature (also called World Wildlife Fund)
WWW	World Weather Watch (WMO)

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Chapter 1

RESOLUTIONS ADOPTED BY THE CONFERENCE

At its 19th plenary meeting, on 14 June 1992, the Conference adopted the Rio Declaration on Environment and Development, Agenda 21 and the non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests (resolution 1). It also adopted a resolution expressing thanks to the people and Government of Brazil (resolution 2) and a resolution concerning the credentials of representatives to the Conference (resolution 3).

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RESOLUTION 1

Adoption of texts on environment and development

The United Nations Conference on Environment and Development,

Having met at Rio de Janeiro from 3 to 14 June 1992,

1. Notes that the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity were opened for signature at the United Nations Conference on Environment and Development and were signed at Rio de Janeiro by 154 States and one regional economic integration organization and 156 States and one regional economic integration organization respectively;

2. Adopts the Rio Declaration on Environment and Development, Agenda 21 and the Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests, which are annexed to the present resolution;

3. Recommends to the General Assembly of the United Nations at its forty-seventh session that it endorse the texts referred to in paragraph 2 above, as adopted.

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Annex I

RIO DECLARATION ON ENVIRONMENT AND DEVELOPMENT

The United Nations Conference on Environment and Development,

Having met at Rio de Janeiro from 3 to 14 June 1992,

Reaffirming the Declaration of the United Nations Conference on the Human Environment, adopted at Stockholm on 16 June 1972, *a*/ and seeking to build upon it,

With the goal of establishing a new and equitable global partnership through the creation of new levels of cooperation among States, key sectors of societies and people,

Working towards international agreements which respect the interests of all and protect the integrity of the global environmental and developmental system,

Recognizing the integral and interdependent nature of the Earth, our home,

Proclaims that:

Principle 1

Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.

Principle 2

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Principle 3

The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.

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a/ *Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972* (United Nations publication, Sales No. E.73.II.A.14 and corrigendum), chap. I.

Principle 4

In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

Principle 5

All States and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world.

Principle 6

The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority. International actions in the field of environment and development should also address the interests and needs of all countries.

Principle 7

States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.

Principle 8

To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.

Principle 9

States should cooperate to strengthen endogenous capacity-building for sustainable development by improving scientific understanding through exchanges of scientific and technological knowledge, and by enhancing the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies.

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Principle 10

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Principle 11

States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and developmental context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries.

Principle 12

States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing transboundary or global environmental problems should, as far as possible, be based on an international consensus.

Principle 13

States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.

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Principle 14

States should effectively cooperate to discourage or prevent the relocation and transfer to other States of any activities and substances that cause severe environmental degradation or are found to be harmful to human health.

Principle 15

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Principle 16

National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.

Principle 17

Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

Principle 18

States shall immediately notify other States of any natural disasters or other emergencies that are likely to produce sudden harmful effects on the environment of those States. Every effort shall be made by the international community to help States so afflicted.

Principle 19

States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith.

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Principle 20

Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development.

Principle 21

The creativity, ideals and courage of the youth of the world should be mobilized to forge a global partnership in order to achieve sustainable development and ensure a better future for all.

Principle 22

Indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.

Principle 23

The environment and natural resources of people under oppression, domination and occupation shall be protected.

Principle 24

Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary.

Principle 25

Peace, development and environmental protection are interdependent and indivisible.

Principle 26

States shall resolve all their environmental disputes peacefully and by appropriate means in accordance with the Charter of the United Nations.

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Principle 27

States and people shall cooperate in good faith and in a spirit of partnership in the fulfilment of the principles embodied in this Declaration and in the further development of international law in the field of sustainable development.

Annex II

AGENDA 21

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* For section II (Conservation and management of resources for development), see A/CONF.151/26 (Vol. II); for section III (Strengthening the role of major groups) and section IV (Means of implementation), see A/CONF.151/26 (Vol. III).

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Chapter 1

PREAMBLE*

1.1. Humanity stands at a defining moment in history. We are confronted with a perpetuation of disparities between and within nations, a worsening of poverty, hunger, ill health and illiteracy, and the continuing deterioration of the ecosystems on which we depend for our well-being. However, integration of environment and development concerns and greater attention to them will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future. No nation can achieve this on its own; but together we can - in a global partnership for sustainable development.

1.2. This global partnership must build on the premises of General Assembly resolution 44/228 of 22 December 1989, which was adopted when the nations of the world called for the United Nations Conference on Environment and Development, and on the acceptance of the need to take a balanced and integrated approach to environnment and development questions.

1.3. Agenda 21 addresses the pressing problems of today and also aims at preparing the world for the challenges of the next century. It reflects a global consensus and political commitment at the highest level on development and environment cooperation. Its successful implementation is first and foremost the responsibility of Governments. National strategies, plans, policies and processes are crucial in achieving this. International cooperation should support and supplement such national efforts. In this context, the United Nations system has a key role to play. Other international, regional and subregional organizations are also called upon to contribute to this effort. The broadest public participation and the active involvement of the non-governmental organizations and other groups should also be encouraged.

1.4. The developmental and environmental objectives of Agenda 21 will require a substantial flow of new and additional financial resources to developing countries, in order to cover the incremental costs for the actions they have to undertake to deal with global environmental problems and to accelerate sustainable development. Financial resources are also required for strengthening the capacity of international institutions for the implementation of Agenda 21. An indicative order-of-magnitude assessment of costs is included in each of the programme areas. This assessment will need to be examined and refined by the relevant implementing agencies and organizations.

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* When the term "Governments" is used, it will be deemed to include the European Economic Community within its areas of competence. Throughout Agenda 21 the term "environmentally sound" means "environmentally safe and sound", in particular when applied to the terms "energy sources", "energy supplies", "energy systems" and "technology" or "technologies".

1.5. In the implementation of the relevant programme areas identified in Agenda 21, special attention should be given to the particular circumstances facing the economies in transition. It must also be recognized that these countries are facing unprecedented challenges in transforming their economies, in some cases in the midst of considerable social and political tension.

1.6. The programme areas that constitute Agenda 21 are described in terms of the basis for action, objectives, activities and means of implementation. Agenda 21 is a dynamic programme. It will be carried out by the various actors according to the different situations, capacities and priorities of countries and regions in full respect of all the principles contained in the Rio Declaration on Environment and Development. It could evolve over time in the light of changing needs and circumstances. This process marks the beginning of a new global partnership for sustainable development.

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SECTION I. SOCIAL AND ECONOMIC DIMENSIONS

Chapter 2

INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC POLICIES

INTRODUCTION

2.1. In order to meet the challenges of environment and development, States have decided to establish a new global partnership. This partnership commits all States to engage in a continuous and constructive dialogue, inspired by the need to achieve a more efficient and equitable world economy, keeping in view the increasing interdependence of the community of nations and that sustainable development should become a priority item on the agenda of the international community. It is recognized that for the success of this new partnership, it is important to overcome confrontation and to foster a climate of genuine cooperation and solidarity. It is equally important to strengthen national and international policies and multinational cooperation to adapt to the new realities.

2.2. Economic policies of individual countries and international economic relations both have great relevance to sustainable development. The reactivation and acceleration of development requires both a dynamic and a supportive international economic environment and determined policies at the national level. It will be frustrated in the absence of either of these requirements. A supportive external economic environment is crucial. The development process will not gather momentum if the global economy lacks dynamism and stability and is beset with uncertainties. Neither will it gather momentum if the developing countries are weighted down by external indebtedness, if development finance is inadequate, if barriers restrict access to markets and if commodity prices and the terms of trade of developing countries remain depressed. The record of the 1980s was essentially negative on each of these counts and needs to be reversed. The policies and measures needed to create an international environment that is strongly supportive of national development efforts are thus vital. International cooperation in this area should be designed to complement and support - not to diminish or subsume - sound domestic economic policies, in both developed and developing countries, if global progress towards sustainable development is to be achieved.

2.3. The international economy should provide a supportive international climate for achieving environment and development goals by:

(a) Promoting sustainable development through trade liberalization;

(b) Making trade and environment mutually supportive;

(c) Providing adequate financial resources to developing countries and dealing with international debt;

(d) Encouraging macroeconomic policies conducive to environment and development.

2.4. Governments recognize that there is a new global effort to relate the elements of the international economic system and mankind's need for a safe and stable natural environment. Therefore, it is the intent of Governments that consensus-building at the intersection of the environmental and trade and development areas will be ongoing in existing international forums, as well as in the domestic policy of each country.

PROGRAMME AREAS

A. Promoting sustainable development through trade

Basis for action

2.5. An open, equitable, secure, non-discriminatory and predictable multilateral trading system that is consistent with the goals of sustainable development and leads to the optimal distribution of global production in accordance with comparative advantage is of benefit to all trading partners. Moreover, improved market access for developing countries' exports in conjunction with sound macroeconomic and environmental policies would have a positive environmental impact and therefore make an important contribution towards sustainable development.

2.6. Experience has shown that sustainable development requires a commitment to sound economic policies and management, an effective and predictable public administration, the integration of environmental concerns into decision-making and progress towards democratic government, in the light of country-specific conditions, which allows for full participation of all parties concerned. These attributes are essential for the fulfilment of the policy directions and objectives listed below.

2.7. The commodity sector dominates the economies of many developing countries in terms of production, employment and export earnings. An important feature of the world commodity economy in the 1980s was the prevalence of very low and declining real prices for most commodities in international markets and a resulting substantial contraction in commodity export earnings for many producing countries. The ability of those countries to mobilize, through international trade, the resources needed to finance investments required for sustainable development may be impaired by this development and by tariff and non-tariff impediments, including tariff escalation, limiting their access to export markets. The removal of existing distortions in international trade is essential. In particular, the achievement of this objective requires that there be substantial and progressive reduction in the support and protection of agriculture - covering internal regimes, market access and export subsidies - as well as of industry and other sectors, in order to avoid inflicting large losses on the more efficient producers, especially in developing countries. Thus, in agriculture, industry and other sectors, there is scope for initiatives aimed at trade liberalization and at policies to make production more responsive to environment and development needs. Trade liberalization should therefore be pursued on a global basis across economic sectors so as to contribute to sustainable development.

2.8. The international trading environment has been affected by a number of developments that have created new challenges and opportunities and have made multilateral economic cooperation of even greater importance. World trade has continued to grow faster than world output in recent years. However, the expansion of world trade has been unevenly spread, and only a limited number of developing countries have been capable of achieving appreciable growth in their exports. Protectionist pressures and unilateral policy actions continue to endanger the functioning of an open multilateral trading system, affecting particularly the export interests of developing countries. Economic integration processes have intensified in recent years and should impart dynamism to global trade and enhance the trade and development possibilities for developing countries. In recent years, a growing number of these countries have adopted courageous policy reforms involving ambitious autonomous trade liberalization, while far-reaching reforms and profound restructuring processes are taking place in Central and Eastern European countries, paving the way for their integration into the world economy and the international trading system. Increased attention is being devoted to enhancing the role of enterprises and promoting competitive markets through adoption of competitive policies. The GSP has proved to be a useful trade policy instrument, although its objectives will have to be fulfilled, and trade facilitation strategies relating to electronic data interchange (EDI) have been effective in improving the trading efficiency of the public and private sectors. The interactions between environment policies and trade issues are manifold and have not yet been fully assessed. An early, balanced, comprehensive and successful outcome of the Uruguay Round of multilateral trade negotiations would bring about further liberalization and expansion of world trade, enhance the trade and development possibilities of developing countries and provide greater security and predictability to the international trading system.

Objectives

2.9. In the years ahead, and taking into account the results of the Uruguay Round of multilateral trade negotiations, Governments should continue to strive to meet the following objectives:

(a) To promote an open, non-discriminatory and equitable multilateral trading system that will enable all countries - in particular, the developing countries - to improve their economic structures and improve the standard of living of their populations through sustained economic development;

(b) To improve access to markets for exports of developing countries;

(c) To improve the functioning of commodity markets and achieve sound, compatible and consistent commodity policies at national and international levels with a view to optimizing the contribution of the commodity sector to sustainable development, taking into account environmental considerations;

(d) To promote and support policies, domestic and international, that make economic growth and environmental protection mutually supportive.

Activities

(a) International and regional cooperation and coordination

Promoting an international trading system that takes account of the needs of developing countries

2.10. Accordingly, the international community should:

(a) Halt and reverse protectionism in order to bring about further liberalization and expansion of world trade, to the benefit of all countries, in particular the developing countries;

(b) Provide for an equitable, secure, non-discriminatory and predictable international trading system;

(c) Facilitate, in a timely way, the integration of all countries into the world economy and the international trading system;

(d) Ensure that environment and trade policies are mutually supportive, with a view to achieving sustainable development;

(e) Strengthen the international trade policies system through an early, balanced, comprehensive and successful outcome of the Uruguay Round of multilateral trade negotiations.

2.11. The international community should aim at finding ways and means of achieving a better functioning and enhanced transparency of commodity markets, greater diversification of the commodity sector in developing economies within a macroeconomic framework that takes into consideration a country's economic structure, resource endowments and market opportunities, and better management of natural resources that takes into account the necessities of sustainable development.

2.12. Therefore, all countries should implement previous commitments to halt and reverse protectionism and further expand market access, particularly in areas of interest to developing countries. This improvement of market access will be facilitated by appropriate structural adjustment in developed countries. Developing countries should continue the trade-policy reforms and structural adjustment they have undertaken. It is thus urgent to achieve an

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improvement in market access conditions for commodities, notably through the progressive removal of barriers that restrict imports, particularly from developing countries, of commodity products in primary and processed forms, as well as the substantial and progressive reduction of types of support that induce uncompetitive production, such as production and export subsidies.

(b) Management related activities

Developing domestic policies that maximize the benefits of trade liberalization for sustainable development

2.13. For developing countries to benefit from the liberalization of trading systems, they should implement the following policies, as appropriate:

(a) Create a domestic environment supportive of an optimal balance between production for the domestic and export markets and remove biases against exports and discourage inefficient import-substitution;

(b) Promote the policy framework and the infrastructure required to improve the efficiency of export and import trade as well as the functioning of domestic markets.

2.14. The following policies should be adopted by developing countries with respect to commodities consistent with market efficiency:

(a) Expand processing, distribution and improve marketing practices and the competitiveness of the commodity sector;

(b) Diversify in order to reduce dependence on commodity exports;

(c) Reflect efficient and sustainable use of factors of production in the formation of commodity prices, including the reflection of environmental, social and resources costs.

(c) Data and information

Encouraging data collection and research

2.15. GATT, UNCTAD and other relevant institutions should continue to collect appropriate trade data and information. The Secretary-General of the United Nations is requested to strengthen the Trade Control Measures Information System managed by UNCTAD.

Improving international cooperation in commodity trade and the diversification of the sector

2.16. With regard to commodity trade, Governments should, directly or through appropriate international organizations, where appropriate:

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(a) Seek optimal functioning of commodity markets, inter alia, through improved market transparency involving exchanges of views and information on investment plans, prospects and markets for individual commodities. Substantive negotiations between producers and consumers should be pursued with a view to achieving viable and more efficient international agreements that take into account market trends, or arrangements, as well as study groups. In this regard, particular attention should be paid to the agreements on cocoa, coffee, sugar and tropical timber. The importance of international commodity agreements and arrangements is underlined. Occupational health and safety matters, technology transfer and services associated with the production, marketing and promotion of commodities, as well as environmental considerations, should be taken into account;

(b) Continue to apply compensation mechanisms for shortfalls in commodity export earnings of developing countries in order to encourage diversification efforts;

(c) Provide assistance to developing countries upon request in the design and implementation of commodity policies and the gathering and utilization of information on commodity markets;

(d) Support the efforts of developing countries to promote the policy framework and infrastructure required to improve the efficiency of export and import trade;

(e) Support the diversification initiatives of the developing countries at the national, regional and international levels.

Means of implementation

(a) Financing and cost evaluation

2.17. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities in this programme area to be about $8.8 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Capacity-building

2.18. The above-mentioned technical cooperation activities aim at strengthening national capabilities for design and implementation of commodity policy, use and management of national resources and the gathering and utilization of information on commodity markets.

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B. Making trade and environment mutually supportive

Basis for action

2.19. Environment and trade policies should be mutually supportive. An open, multilateral trading system makes possible a more efficient allocation and use of resources and thereby contributes to an increase in production and incomes and to lessening demands on the environment. It thus provides additional resources needed for economic growth and development and improved environmental protection. A sound environment, on the other hand, provides the ecological and other resources needed to sustain growth and underpin a continuing expansion of trade. An open, multilateral trading system, supported by the adoption of sound environmental policies, would have a positive impact on the environment and contribute to sustainable development.

2.20. International cooperation in the environmental field is growing, and in a number of cases trade provisions in multilateral environment agreements have played a role in tackling global environmental challenges. Trade measures have thus been used in certain specific instances, where considered necessary, to enhance the effectiveness of environmental regulations for the protection of the environment. Such regulations should address the root causes of environmental degradation so as not to result in unjustified restrictions on trade. The challenge is to ensure that trade and environment policies are consistent and reinforce the process of sustainable development. However, account should be taken of the fact that environmental standards valid for developed countries may have unwarranted social and economic costs in developing countries.

Objectives

2.21. Governments should strive to meet the following objectives, through relevant multilateral forums, including GATT, UNCTAD and other international organizations:

(a) To make international trade and environment policies mutually supportive in favour of sustainable development;

(b) To clarify the role of GATT, UNCTAD and other international organizations in dealing with trade and environment-related issues, including, where relevant, conciliation procedure and dispute settlement;

(c) To encourage international productivity and competitiveness and encourage a constructive role on the part of industry in dealing with environment and development issues.

Activities

Developing an environment/trade and development agenda

2.22. Governments should encourage GATT, UNCTAD and other relevant international and regional economic institutions to examine, in accordance with their respective mandates and competences, the following propositions and principles:

(a) Elaborate adequate studies for the better understanding of the relationship between trade and environment for the promotion of sustainable development;

(b) Promote a dialogue between trade, development and environment communities;

(c) In those cases when trade measures related to environment are used, ensure transparency and compatibility with international obligations;

(d) Deal with the root causes of environment and development problems in a manner that avoids the adoption of environmental measures resulting in unjustified restrictions on trade;

(e) Seek to avoid the use of trade restrictions or distortions as a means to offset differences in cost arising from differences in environmental standards and regulations, since their application could lead to trade distortions and increase protectionist tendencies;

(f) Ensure that environment-related regulations or standards, including those related to health and safety standards, do not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on trade;

(g) Ensure that special factors affecting environment and trade policies in the developing countries are borne in mind in the application of environmental standards, as well as in the use of any trade measures. It is worth noting that standards that are valid in the most advanced countries may be inappropriate and of unwarranted social cost for the developing countries;

(h) Encourage participation of developing countries in multilateral agreements through such mechanisms as special transitional rules;

(i) Avoid unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country. Environmental measures addressing transborder or global environmental problems should, as far as possible, be based on an international consensus. Domestic measures targeted to achieve certain environmental objectives may need trade measures to render them effective. Should trade policy measures be found necessary for the enforcement of environmental policies, certain principles and rules should apply. These could include, *inter alia*, the principle of non-discrimination; the principle that the trade measure chosen should be the least trade-restrictive necessary to achieve the objectives; an obligation to ensure transparency in the use of trade measures related to the environment and to provide adequate notification of national regulations; and the need to give consideration to the special conditions and developmental requirements of developing countries as they move towards internationally agreed environmental objectives;

(j) Develop more precision, where necessary, and clarify the relationship between GATT provisions and some of the multilateral measures adopted in the environment area;

(k) Ensure public input in the formation, negotiation and implementation of trade policies as a means of fostering increased transparency in the light of country-specific conditions;

(l) Ensure that environmental policies provide the appropriate legal and institutional framework to respond to new needs for the protection of the environment that may result from changes in production and trade specialization.

C. Providing adequate financial resources to developing countries

Basis for action

2.23. Investment is critical to the ability of developing countries to achieve needed economic growth to improve the welfare of their populations and to meet their basic needs in a sustainable manner, all without deteriorating or depleting the resource base that underpins development. Sustainable development requires increased investment, for which domestic and external financial resources are needed. Foreign private investment and the return of flight capital, which depend on a healthy investment climate, are an important source of financial resources. Many developing countries have experienced a decade-long situation of negative net transfer of financial resources, during which their financial receipts were exceeded by payments they had to make, in particular for debt-servicing. As a result, domestically mobilized resources had to be transferred abroad instead of being invested locally in order to promote sustainable economic development.

2.24. For many developing countries, the reactivation of development will not take place without an early and durable solution to the problems of external indebtedness, taking into account the fact that, for many developing countries, external debt burdens are a significant problem. The burden of debt-service payments on those countries has imposed severe constraints on their ability to accelerate growth and eradicate poverty and has led to a contraction in imports, investment and consumption. External indebtedness has emerged as a main factor in the economic stalemate in the developing countries. Continued vigorous implementation of the evolving international debt strategy is aimed at restoring debtor countries' external financial

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viability, and the resumption of their growth and development would assist in achieving sustainable growth and development. In this context, additional financial resources in favour of developing countries and the efficient utilization of such resources are essential.

Objectives

2.25. The specific requirements for the implementation of the sectoral and cross-sectoral programmes included in Agenda 21 are dealt with in the relevant programme areas and in chapter 33 (Financial resources and mechanisms).

Activities

(a) Meeting international targets of official development assistance funding

2.26. As discussed in chapter 33, new and additional resources should be provided to support Agenda 21 programmes.

(b) Addressing the debt issue

2.27. In regard to the external debt incurred with commercial banks, the progress being made under the strengthened debt strategy is recognized and a more rapid implementation of this strategy is encouraged. Some countries have already benefited from the combination of sound adjustment policies and commercial bank debt reduction or equivalent measures. The international community encourages:

(a) Other countries with heavy debts to banks to negotiate similar commercial bank debt reduction with their creditors;

(b) The parties to such a negotiation to take due account of both the medium-term debt reduction and new money requirements of the debtor country;

(c) Multilateral institutions actively engaged in the strengthened international debt strategy to continue to support debt-reduction packages related to commercial bank debt with a view to ensuring that the magnitude of such financing is consonant with the evolving debt strategy;

(d) Creditor banks to participate in debt and debt-service reduction;

(e) Strengthened policies to attract direct investment, avoid unsustainable levels of debt and foster the return of flight capital.

2.28. With regard to debt owed to official bilateral creditors, the recent measures taken by the Paris Club with regard to more generous terms of relief to the poorest most indebted countries are welcomed. Ongoing efforts to implement these "Trinidad terms" measures in a manner commensurate with the payments capacity of those countries and in a way that gives additional support to their economic reform efforts are welcomed. The substantial bilateral debt reduction undertaken by some creditor countries is also

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welcomed, and others which are in a position to do so are encouraged to take similar action.

2.29. The actions of low-income countries with substantial debt burdens which continue, at great cost, to service their debt and safeguard their creditworthiness are commended. Particular attention should be paid to their resource needs. Other debt-distressed developing countries which are making great efforts to continue to service their debt and meet their external financial obligations also deserve due attention.

2.30. In connection with multilateral debt, it is urged that serious attention be given to continuing to work towards growth-oriented solutions to the problem of developing countries with serious debt-servicing problems, including those whose debt is mainly to official creditors or to multilateral financial institutions. Particularly in the case of low-income countries in the process of economic reform, the support of the multilateral financial institutions in the form of new disbursements and the use of their concessional funds is welcomed. The use of support groups should be continued in providing resources to clear arrears of countries embarking upon vigorous economic reform programmes supported by IMF and the World Bank. Measures by the multilateral financial institutions such as the refinancing of interest on non-concessional loans with IDA reflows - "fifth dimension" - are noted with appreciation.

Means of implementation

Financing and cost evaluation*

D. Encouraging economic policies conducive to sustainable development

Basis for action

2.31. The unfavourable external environment facing developing countries makes domestic resource mobilization and efficient allocation and utilization of domestically mobilized resources all the more important for the promotion of sustainable development. In a number of countries, policies are necessary to correct misdirected public spending, large budget deficits and other macroeconomic imbalances, restrictive policies and distortions in the areas of exchange rates, investment and finance, and obstacles to entrepreneurship. In developed countries, continuing policy reform and adjustment, including appropriate savings rates, would help generate resources to support the transition to sustainable development both domestically and in developing countries.

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* See chap. 33 (Financial resources and mechanisms).

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2.32. Good management that fosters the association of effective, efficient, honest, equitable and accountable public administration with individual rights and opportunities is an essential element for sustainable, broadly based development and sound economic performance at all development levels. All countries should increase their efforts to eradicate mismanagement of public and private affairs, including corruption, taking into account the factors responsible for, and agents involved in, this phenomenon.

2.33. Many indebted developing countries are undergoing structural adjustment programmes relating to debt rescheduling or new loans. While such programmes are necessary for improving the balance in fiscal budgets and balance-of-payments accounts, in some cases they have resulted in adverse social and environmental effects, such as cuts in allocations for health care, education and environmental protection. It is important to ensure that structural adjustment programmes do not have negative impacts on the environment and social development so that such programmes can be more in line with the objectives of sustainable development.

Objectives

2.34. It is necessary to establish, in the light of the country-specific conditions, economic policy reforms that promote the efficient planning and utilization of resources for sustainable development through sound economic and social policies, foster entrepreneurship and the incorporation of social and environmental costs in resource pricing, and remove sources of distortion in the area of trade and investment.

Activities

(a) Management-related activities

Promoting sound economic policies

2.35. The industrialized countries and other countries in a position to do so should strengthen their efforts:

(a) To encourage a stable and predictable international economic environment, particularly with regard to monetary stability, real rates of interest and fluctuations in key exchange rates;

(b) To stimulate savings and reduce fiscal deficits;

(c) To ensure that the processes of policy coordination take into account the interests and concerns of the developing countries, including the need to promote positive action to support the efforts of the least developed countries to halt their marginalization in the world economy;

(d) To undertake appropriate national macroeconomic and structural policies aimed at promoting non-inflationary growth, narrowing their major external imbalances and increasing the adjustment capacity of their economies.

2.36. Developing countries should consider strengthening their efforts to implement sound economic policies:

(a) That maintain the monetary and fiscal discipline required to promote price stability and external balance;

(b) That result in realistic exchange rates;

(c) That raise domestic savings and investment, as well as improve returns to investment.

2.37. More specifically, all countries should develop policies that improve efficiency in the allocation of resources and take full advantage of the opportunities offered by the changing global economic environment. In particular, wherever appropriate, and taking into account national strategies and objectives, countries should:

(a) Remove the barriers to progress caused by bureaucratic inefficiencies, administrative strains, unnecessary controls and the neglect of market conditions;

(b) Promote transparency in administration and decision-making;

(c) Encourage the private sector and foster entrepreneurship by improving institutional facilities for enterprise creation and market entry. The essential objective would be to simplify or remove the restrictions, regulations and formalities that make it more complicated, costly and time-consuming to set up and operate enterprises in many developing countries;

(d) Promote and support the investment and infrastructure required for sustainable economic growth and diversification on an environmentally sound and sustainable basis;

(e) Provide scope for appropriate economic instruments, including market mechanisms, in harmony with the objectives of sustainable development and fulfilment of basic needs;

(f) Promote the operation of effective tax systems and financial sectors;

(g) Provide opportunities for small-scale enterprises, both farm and non-farm, and for the indigenous population and local communities to contribute fully to the attainment of sustainable development;

(h) Remove biases against exports and in favour of inefficient import substitution and establish policies that allow them to benefit fully from the flows of foreign investment, within the framework of national, social, economic and developmental goals;

(i) Promote the creation of a domestic economic environment supportive of an optimal balance between production for the domestic and export markets.

(b) International and regional cooperation and coordination

2.38. Governments of developed countries and those of other countries in a position to do so should, directly or through appropriate international and regional organizations and international lending institutions, enhance their efforts to provide developing countries with increased technical assistance for the following:

(a) Capacity-building in the nation's design and implementation of economic policies, upon request;

(b) Design and operation of efficient tax systems, accounting systems and financial sectors;

(c) Promotion of entrepreneurship.

2.39. International financial and development institutions should further review their policies and programmes in the light of the objective of sustainable development.

2.40. Stronger economic cooperation among developing countries has long been accepted as an important component of efforts to promote economic growth and technological capabilities and to accelerate development in the developing world. Therefore, the efforts of the developing countries to promote economic cooperation among themselves should be enhanced and continue to be supported by the international community.

Means of implementation

(a) Financing and cost evaluation

2.41. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities in this programme area to be about $50 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, *inter alia*, the specific strategies and programmes Governments decide upon for implementation.

(b) Capacity-building

2.42. The above-mentioned policy changes in developing countries involve substantial national efforts for capacity-building in the areas of public administration, central banking, tax administration, savings institutions and financial markets.

2.43. Particular efforts in the implementation of the four programme areas identified in this chapter are warranted in view of the especially acute environmental and developmental problems of the least developed countries.

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Chapter 3

COMBATING POVERTY

PROGRAMME AREA

Enabling the poor to achieve sustainable livelihoods

Basis for action

3.1. Poverty is a complex multidimensional problem with origins in both the national and international domains. No uniform solution can be found for global application. Rather, country-specific programmes to tackle poverty and international efforts supporting national efforts, as well as the parallel process of creating a supportive international environment, are crucial for a solution to this problem. The eradication of poverty and hunger, greater equity in income distribution and human resource development remain major challenges everywhere. The struggle against poverty is the shared responsibility of all countries.

3.2. While managing resources sustainably, an environmental policy that focuses mainly on the conservation and protection of resources must take due account of those who depend on the resources for their livelihoods. Otherwise it could have an adverse impact both on poverty and on chances for long-term success in resource and environmental conservation. Equally, a development policy that focuses mainly on increasing the production of goods without addressing the sustainability of the resources on which production is based will sooner or later run into declining productivity, which could also have an adverse impact on poverty. A specific anti-poverty strategy is therefore one of the basic conditions for ensuring sustainable development. An effective strategy for tackling the problems of poverty, development and environment simultaneously should begin by focusing on resources, production and people and should cover demographic issues, enhanced health care and education, the rights of women, the role of youth and of indigenous people and local communities and a democratic participation process in association with improved governance.

3.3. Integral to such action is, together with international support, the promotion of economic growth in developing countries that is both sustained and sustainable and direct action in eradicating poverty by strengthening employment and income-generating programmes.

Objectives

3.4. The long-term objective of enabling all people to achieve sustainable livelihoods should provide an integrating factor that allows policies to address issues of development, sustainable resource management and poverty eradication simultaneously. The objectives of this programme area are:

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(a) To provide all persons urgently with the opportunity to earn a sustainable livelihood;

(b) To implement policies and strategies that promote adequate levels of funding and focus on integrated human development policies, including income generation, increased local control of resources, local institution-strengthening and capacity-building and greater involvement of non-governmental organizations and local levels of government as delivery mechanisms;

(c) To develop for all poverty-stricken areas integrated strategies and programmes of sound and sustainable management of the environment, resource mobilization, poverty eradication and alleviation, employment and income generation;

(d) To create a focus in national development plans and budgets on investment in human capital, with special policies and programmes directed at rural areas, the urban poor, women and children.

Activities

3.5. Activities that will contribute to the integrated promotion of sustainable livelihoods and environmental protection cover a variety of sectoral interventions involving a range of actors, from local to global, and are essential at every level, especially the community and local levels. Enabling actions will be necessary at the national and international levels, taking full account of regional and subregional conditions to support a locally driven and country-specific approach. In general design, the programmes should:

(a) Focus on the empowerment of local and community groups through the principle of delegating authority, accountability and resources to the most appropriate level to ensure that the programme will be geographically and ecologically specific;

(b) Contain immediate measures to enable those groups to alleviate poverty and to develop sustainability;

(c) Contain a long-term strategy aimed at establishing the best possible conditions for sustainable local, regional and national development that would eliminate poverty and reduce the inequalities between various population groups. It should assist the most disadvantaged groups - in particular, women, children and youth within those groups - and refugees. The groups will include poor smallholders, pastoralists, artisans, fishing communities, landless people, indigenous communities, migrants and the urban informal sector.

3.6. The focus here is on specific cross-cutting measures - in particular, in the areas of basic education, primary/maternal health care, and the advancement of women.

(a) Empowering communities

3.7. Sustainable development must be achieved at every level of society. Peoples' organizations, women's groups and non-governmental organizations are important sources of innovation and action at the local level and have a strong interest and proven ability to promote sustainable livelihoods. Governments, in cooperation with appropriate international and non-governmental organizations, should support a community-driven approach to sustainability, which would include, inter alia:

(a) Empowering women through full participation in decision-making;

(b) Respecting the cultural integrity and the rights of indigenous people and their communities;

(c) Promoting or establishing grass-roots mechanisms to allow for the sharing of experience and knowledge between communities;

(d) Giving communities a large measure of participation in the sustainable management and protection of the local natural resources in order to enhance their productive capacity;

(e) Establishing a network of community-based learning centres for capacity-building and sustainable development.

(b) Management-related activities

3.8. Governments, with the assistance of and in cooperation with appropriate international, non-governmental and local community organizations, should establish measures that will directly or indirectly:

(a) Generate remunerative employment and productive occupational opportunities compatible with country-specific factor endowments, on a scale sufficient to take care of prospective increases in the labour force and to cover backlogs;

(b) With international support, where necessary, develop adequate infrastructure, marketing systems, technology systems, credit systems and the like and the human resources needed to support the above actions and to achieve a widening of options for resource-poor people. High priority should be given to basic education and professional training;

(c) Provide substantial increases in economically efficient resource productivity and measures to ensure that the local population benefits in adequate measure from resource use;

(d) Empower community organizations and people to enable them to achieve sustainable livelihoods;

(e) Set up an effective primary health care and maternal health care system accessible to all;

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(f) Consider strengthening/developing legal frameworks for land management, access to land resources and land ownership - in particular, for women - and for the protection of tenants;

(g) Rehabilitate degraded resources, to the extent practicable, and introduce policy measures to promote sustainable use of resources for basic human needs;

(h) Establish new community-based mechanisms and strengthen existing mechanisms to enable communities to gain sustained access to resources needed by the poor to overcome their poverty;

(i) Implement mechanisms for popular participation - particularly by poor people, especially women - in local community groups, to promote sustainable development;

(j) Implement, as a matter of urgency, in accordance with country-specific conditions and legal systems, measures to ensure that women and men have the same right to decide freely and responsibly on the number and spacing of their children and have access to the information, education and means, as appropriate, to enable them to exercise this right in keeping with their freedom, dignity and personally held values, taking into account ethical and cultural considerations. Governments should take active steps to implement programmes to establish and strengthen preventive and curative health facilities, which include women-centred, women-managed, safe and effective reproductive health care and affordable, accessible services, as appropriate, for the responsible planning of family size, in keeping with freedom, dignity and personally held values, taking into account ethical and cultural considerations. Programmes should focus on providing comprehensive health care, including pre-natal care, education and information on health and responsible parenthood and should provide the opportunity for all women to breast-feed fully, at least during the first four months post-partum. Programmes should fully support women's productive and reproductive roles and well-being, with special attention to the need for providing equal and improved health care for all children and the need to reduce the risk of maternal and child mortality and sickness;

(k) Adopt integrated policies aiming at sustainability in the management of urban centres;

(l) Undertake activities aimed at the promotion of food security and, where appropriate, food self-sufficiency within the context of sustainable agriculture;

(m) Support research on and integration of traditional methods of production that have been shown to be environmentally sustainable;

(n) Actively seek to recognize and integrate informal-sector activities into the economy by removing regulations and hindrances that discriminate against activities in those sectors;

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(o) Consider making available lines of credit and other facilities for the informal sector and improved access to land for the landless poor so that they can acquire the means of production and reliable access to natural resources. In many instances special considerations for women are required. Strict feasibility appraisals are needed for borrowers to avoid debt crises;

(p) Provide the poor with access to fresh water and sanitation;

(q) Provide the poor with access to primary education.

(c) Data, information and evaluation

3.9. Governments should improve the collection of information on target groups and target areas in order to facilitate the design of focused programmes and activities, consistent with the target-group needs and aspirations. Evaluation of such programmes should be gender-specific, since women are a particularly disadvantaged group.

(d) International and regional cooperation and coordination

3.10. The United Nations system, through its relevant organs, organizations and bodies, in cooperation with Member States and with appropriate international and non-governmental organizations, should make poverty alleviation a major priority and should:

(a) Assist Governments, when requested, in the formulation and implementation of national action programmes on poverty alleviation and sustainable development. Action-oriented activities of relevance to the above objectives, such as poverty eradication, projects and programmes supplemented where relevant by food aid, and support and special emphasis on employment and income generation, should be given particular attention in this regard;

(b) Promote technical cooperation among developing countries for poverty eradication activities;

(c) Strengthen existing structures in the United Nations system for coordination of action relating to poverty eradication, including the establishment of a focal point for information exchange and the formulation and implementation of replicable pilot projects to combat poverty;

(d) In the follow-up of the implementation of Agenda 21, give high priority to the review of the progress made in eradicating poverty;

(e) Examine the international economic framework, including resource flows and structural adjustment programmes, to ensure that social and environmental concerns are addressed, and in this connection, conduct a review of the policies of international organizations, bodies and agencies, including financial institutions, to ensure the continued provision of basic services to the poor and needy;

(f) Promote international cooperation to address the root causes of poverty. The development process will not gather momentum if developing countries are weighted down by external indebtedness, if development finance is inadequate, if barriers restrict access to markets and if commodity prices and the terms of trade in developing countries remain depressed.

Means of implementation

(a) Financing and cost evaluation

3.11. The secretariat of the Conference has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $30 billion, including about $15 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. This estimate overlaps estimates in other parts of Agenda 21. Actual costs and financial terms, including any that are non-concessional, will depend upon, *inter alia*, the specific strategies and programmes Governments decide upon for implementation.

(b) Capacity-building

3.12. National capacity-building for implementation of the above activities is crucial and should be given high priority. It is particularly important to focus capacity-building at the local community level in order to support a community-driven approach to sustainability and to establish and strengthen mechanisms to allow sharing of experience and knowledge between community groups at national and international levels. Requirements for such activities are considerable and are related to the various relevant sectors of Agenda 21 calling for requisite international, financial and technological support.

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Chapter 4

CHANGING CONSUMPTION PATTERNS

4.1. This chapter contains the following programme areas:

(a) Focusing on unsustainable patterns of production and consumption;

(b) Developing national policies and strategies to encourage changes in unsustainable consumption patterns.

4.2. Since the issue of changing consumption patterns is very broad, it is addressed in several parts of Agenda 21, notably those dealing with energy, transportation and wastes, and in the chapters on economic instruments and the transfer of technology. The present chapter should also be read in conjunction with chapter 5 (Demographic dynamics and sustainability).

PROGRAMME AREAS

A. Focusing on unsustainable patterns of production and consumption

Basis for action

4.3. Poverty and environmental degradation are closely interrelated. While poverty results in certain kinds of environmental stress, the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries, which is a matter of grave concern, aggravating poverty and imbalances.

4.4. Measures to be undertaken at the international level for the protection and enhancement of the environment must take fully into account the current imbalances in the global patterns of consumption and production.

4.5. Special attention should be paid to the demand for natural resources generated by unsustainable consumption and to the efficient use of those resources consistent with the goal of minimizing depletion and reducing pollution. Although consumption patterns are very high in certain parts of the world, the basic consumer needs of a large section of humanity are not being met. This results in excessive demands and unsustainable lifestyles among the richer segments, which place immense stress on the environment. The poorer segments, meanwhile, are unable to meet food, health care, shelter and educational needs. Changing consumption patterns will require a multipronged strategy focusing on demand, meeting the basic needs of the poor, and reducing wastage and the use of finite resources in the production process.

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4.6. Growing recognition of the importance of addressing consumption has also not yet been matched by an understanding of its implications. Some economists are questioning traditional concepts of economic growth and underlining the importance of pursuing economic objectives that take account of the full value of natural resource capital. More needs to be known about the role of consumption in relation to economic growth and population dynamics in order to formulate coherent international and national policies.

Objectives

4.7. Action is needed to meet the following broad objectives:

(a) To promote patterns of consumption and production that reduce environmental stress and will meet the basic needs of humanity;

(b) To develop a better understanding of the role of consumption and how to bring about more sustainable consumption patterns.

Activities

(a) Management-related activities

Adopting an international approach to achieving sustainable consumption patterns

4.8. In principle, countries should be guided by the following basic objectives in their efforts to address consumption and lifestyles in the context of environment and development:

(a) All countries should strive to promote sustainable consumption patterns;

(b) Developed countries should take the lead in achieving sustainable consumption patterns;

(c) Developing countries should seek to achieve sustainable consumption patterns in their development process, guaranteeing the provision of basic needs for the poor, while avoiding those unsustainable patterns, particularly in industrialized countries, generally recognized as unduly hazardous to the environment, inefficient and wasteful, in their development processes. This requires enhanced technological and other assistance from industrialized countries.

4.9. In the follow-up of the implementation of Agenda 21 the review of progress made in achieving sustainable consumption patterns should be given high priority.

(b) Data and information

Undertaking research on consumption

4.10. In order to support this broad strategy, Governments, and/or private research and policy institutes, with the assistance of regional and international economic and environmental organizations, should make a concerted effort to:

(a) Expand or promote databases on production and consumption and develop methodologies for analysing them;

(b) Assess the relationship between production and consumption, environment, technological adaptation and innovation, economic growth and development, and demographic factors;

(c) Examine the impact of ongoing changes in the structure of modern industrial economies away from material-intensive economic growth;

(d) Consider how economies can grow and prosper while reducing the use of energy and materials and the production of harmful materials;

(e) Identify balanced patterns of consumption worldwide which the Earth can support in the long term.

Developing new concepts of sustainable economic growth and prosperity

4.11. Consideration should also be given to the present concepts of economic growth and the need for new concepts of wealth and prosperity which allow higher standards of living through changed lifestyles and are less dependent on the Earth's finite resources and more in harmony with the Earth's carrying capacity. This should be reflected in the evolution of new systems of national accounts and other indicators of sustainable development.

(c) International cooperation and coordination

4.12. While international review processes exist for examining economic, development and demographic factors, more attention needs to be paid to issues related to consumption and production patterns and sustainable lifestyles and environment.

4.13. In the follow-up of the implementation of Agenda 21, reviewing the role and impact of unsustainable production and consumption patterns and lifestyles and their relation to sustainable development should be given high priority.

Financing and cost evaluation

4.14. The Conference secretariat has estimated that implementation of this programme is not likely to require significant new financial resources.

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B. Developing national policies and strategies to encourage changes in unsustainable consumption patterns

Basis for action

4.15. Achieving the goals of environmental quality and sustainable development will require efficiency in production and changes in consumption patterns in order to emphasize optimization of resource use and minimization of waste. In many instances, this will require reorientation of existing production and consumption patterns that have developed in industrial societies and are in turn emulated in much of the world.

4.16. Progress can be made by strengthening positive trends and directions that are emerging, as part of a process aimed at achieving significant changes in the consumption patterns of industries, Governments, households and individuals.

Objectives

4.17. In the years ahead, Governments, working with appropriate organizations, should strive to meet the following broad objectives:

(a) To promote efficiency in production processes and reduce wasteful consumption in the process of economic growth, taking into account the development needs of developing countries;

(b) To develop a domestic policy framework that will encourage a shift to more sustainable patterns of production and consumption;

(c) To reinforce both values that encourage sustainable production and consumption patterns and policies that encourage the transfer of environmentally sound technologies to developing countries.

Activities

(a) Encouraging greater efficiency in the use of energy and resources

4.18. Reducing the amount of energy and materials used per unit in the production of goods and services can contribute both to the alleviation of environmental stress and to greater economic and industrial productivity and competitiveness. Governments, in cooperation with industry, should therefore intensify efforts to use energy and resources in an economically efficient and environmentally sound manner by:

(a) Encouraging the dissemination of existing environmentally sound technologies;

(b) Promoting research and development in environmentally sound technologies;

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(c) Assisting developing countries to use these technologies efficiently and to develop technologies suited to their particular circumstances;

(d) Encouraging the environmentally sound use of new and renewable sources of energy;

(e) Encouraging the environmentally sound and sustainable use of renewable natural resources.

(b) Minimizing the generation of wastes

4.19. At the same time, society needs to develop effective ways of dealing with the problem of disposing of mounting levels of waste products and materials. Governments, together with industry, households and the public, should make a concerted effort to reduce the generation of wastes and waste products by:

(a) Encouraging recycling in industrial processes and at the consumed level;

(b) Reducing wasteful packaging of products;

(c) Encouraging the introduction of more environmentally sound products.

(c) Assisting individuals and households to make environmentally sound purchasing decisions

4.20. The recent emergence in many countries of a more environmentally conscious consumer public, combined with increased interest on the part of some industries in providing environmentally sound consumer products, is a significant development that should be encouraged. Governments and international organizations, together with the private sector, should develop criteria and methodologies for the assessment of environmental impacts and resource requirements throughout the full life cycle of products and processes. Results of those assessments should be transformed into clear indicators in order to inform consumers and decision makers.

4.21. Governments, in cooperation with industry and other relevant groups, should encourage expansion of environmental labelling and other environmentally related product information programmes designed to assist consumers to make informed choices.

4.22. They should also encourage the emergence of an informed consumer public and assist individuals and households to make environmentally informed choices by:

(a) Providing information on the consequences of consumption choices and behaviour so as to encourage demand for environmentally sound products and use of products;

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(b) Making consumers aware of the health and environmental impact of products, through such means as consumer legislation and environmental labelling;

(c) Encouraging specific consumer-oriented programmes, such as recycling and deposit/refund systems.

(d) Exercising leadership through government purchasing

4.23. Governments themselves also play a role in consumption, particularly in countries where the public sector plays a large role in the economy and can have a considerable influence on both corporate decisions and public perceptions. They should therefore review the purchasing policies of their agencies and departments so that they may improve, where possible, the environmental content of government procurement policies, without prejudice to international trade principles.

(e) Moving towards environmentally sound pricing

4.24. Without the stimulus of prices and market signals that make clear to producers and consumers the environmental costs of the consumption of energy, materials and natural resources and the generation of wastes, significant changes in consumption and production patterns seem unlikely to occur in the near future.

4.25. Some progress has begun in the use of appropriate economic instruments to influence consumer behaviour. These instruments include environmental charges and taxes, deposit/refund systems, etc. This process should be encouraged in the light of country-specific conditions.

(f) Reinforcing values that support sustainable consumption

4.26. Governments and private-sector organizations should promote more positive attitudes towards sustainable consumption through education, public awareness programmes and other means, such as positive advertising of products and services that utilize environmentally sound technologies or encourage sustainable production and consumption patterns. In the review of the implementation of Agenda 21, an assessment of the progress achieved in developing these national policies and strategies should be given due consideration.

Means of implementation

4.27. This programme is concerned primarily with changes in unsustainable patterns of consumption and production and values that encourage sustainable consumption patterns and lifestyles. It requires the combined efforts of Governments, consumers and producers. Particular attention should be paid to the significant role played by women and households as consumers and the potential impacts of their combined purchasing power on the economy.

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Chapter 5

DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY

5.1. This chapter contains the following programme areas:

(a) Developing and disseminating knowledge concerning the links between demographic trends and factors and sustainable development;

(b) Formulating integrated national policies for environment and development, taking into account demographic trends and factors;

(c) Implementing integrated, environment and development programmes at the local level, taking into account demographic trends and factors.

PROGRAMME AREAS

A. Developing and disseminating knowledge concerning the links between demographic trends and factors and sustainable development

Basis for action

5.2. Demographic trends and factors and sustainable development have a synergistic relationship.

5.3. The growth of world population and production combined with unsustainable consumption patterns places increasingly severe stress on the life-supporting capacities of our planet. These interactive processes affect the use of land, water, air, energy and other resources. Rapidly growing cities, unless well-managed, face major environmental problems. The increase in both the number and size of cities calls for greater attention to issues of local government and municipal management. The human dimensions are key elements to consider in this intricate set of relationships and they should be adequately taken into consideration in comprehensive policies for sustainable development. Such policies should address the linkages of demographic trends and factors, resource use, appropriate technology dissemination, and development. Population policy should also recognize the role played by human beings in environmental and development concerns. There is a need to increase awareness of this issue among decision makers at all levels and to provide both better information on which to base national and international policies and a framework against which to interpret this information.

5.4. There is a need to develop strategies to mitigate both the adverse impact on the environment of human activities and the adverse impact of environmental change on human populations. The world's population is expected to exceed 8 billion by the year 2020. Sixty per cent of the world's population already live in coastal areas, while 65 per cent of cities with

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populations above 2.5 million are located along the world coasts; several of them are already at or below the present sea level.

Objectives

5.5. The following objectives should be achieved as soon as practicable:

(a) To incorporate demographic trends and factors in the global analysis of environment and development issues;

(b) To develop a better understanding of the relationships among demographic dynamics, technology, cultural behaviour, natural resources and life support systems;

(c) To assess human vulnerability in ecologically sensitive areas and centres of population to determine the priorities for action at all levels, taking full account of community defined needs.

Activities

Research on the interaction between demographic trends and factors and sustainable development

5.6. Relevant international, regional and national institutions should consider undertaking the following activities:

(a) Identifying the interactions between demographic processes, natural resources and life support systems, bearing in mind regional and subregional variations deriving from, *inter alia*, different levels of development;

(b) Integrating demographic trends and factors into the ongoing study of environmental change, using the expertise of international, regional and national research networks and of local communities, first, to study the human dimensions of environmental change and, second, to identify vulnerable areas;

(c) Identifying priority areas for action and developing strategies and programmes to mitigate the adverse impact of environmental change on human populations, and vice versa.

Means of implementation

(a) Financing and cost evaluation

5.7. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $10 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, *inter alia*, the specific strategies and programmes Governments decide upon for implementation.

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(b) Strengthening research programmes that integrate population, environment and development

5.8. In order to integrate demographic analysis into a broader social science perspective on environment and development, interdisciplinary research should be increased. International institutions and networks of experts should enhance their scientific capacity, taking full account of community experience and knowledge, and should disseminate the experience gained in multidisciplinary approaches and in linking theory to action.

5.9. Better modelling capabilities should be developed, identifying the range of possible outcomes of current human activities, especially the interrelated impact of demographic trends and factors, per capita resource use and wealth distribution, as well as the major migration flows that may be expected with increasing climatic events and cumulative environmental change that may destroy people's local livelihoods.

(c) Developing information and public awareness

5.10. Socio-demographic information should be developed in a suitable format for interfacing with physical, biological and socio-economic data. Compatible spatial and temporal scales, cross-country and time-series information, as well as global behavioural indicators should be developed, learning from local communities' perceptions and attitudes.

5.11. Awareness should be increased at all levels concerning the need to optimize the sustainable use of resources through efficient resource management, taking into account the development needs of the populations of developing countries.

5.12. Awareness should be increased of the fundamental linkages between improving the status of women and demographic dynamics, particularly through women's access to education, primary and reproductive health care programmes, economic independence and their effective, equitable participation in all levels of decision-making.

5.13. Results of research concerned with sustainable development issues should be disseminated through technical reports, scientific journals, the media, workshops, forums or other means so that the information can be used by decision makers at all levels and increase public awareness.

(d) Developing and/or enhancing institutional capacity and collaboration

5.14. Collaboration and exchange of information should be increased between research institutions and international, regional and national agencies and all other sectors (including the private sector, local communities, non-governmental organizations and scientific institutions) from both the industrialized and developing countries, as appropriate.

5.15. Efforts should be intensified to enhance the capacities of national and local governments, the private sector and non-governmental organizations in developing countries to meet the growing needs for improved management of rapidly growing urban areas.

B. Formulating integrated national policies for environment and development, taking into account demographic trends and factors

Basis for action

5.16. Existing plans for sustainable development have generally recognized demographic trends and factors as elements that have a critical influence on consumption patterns, production, lifestyles and long-term sustainability. But in future, more attention will have to be given to these issues in general policy formulation and the design of development plans. To do this, all countries will have to improve their own capacities to assess the environment and development implications of their demographic trends and factors. They will also need to formulate and implement policies and action programmes where appropriate. Policies should be designed to address the consequences of population growth built into population momentum, while at the same time incorporating measures to bring about demographic transition. They should combine environmental concerns and population issues within a holistic view of development whose primary goals include the alleviation of poverty; secure livelihoods; good health; quality of life; improvement of the status and income of women and their access to schooling and professional training, as well as fulfilment of their personal aspirations; and empowerment of individuals and communities. Recognizing that large increases in the size and number of cities will occur in developing countries under any likely population scenario, greater attention should be given to preparing for the needs, in particular of women and children, for improved municipal management and local government.

Objective

5.17. Full integration of population concerns into national planning, policy and decision-making processes should continue. Population policies and programmes should be considered, with full recognition of women's rights.

Activities

5.18. Governments and other relevant actors could, *inter alia*, undertake the following activities, with appropriate assistance from aid agencies, and report on their status of implementation to the International Conference on Population and Development to be held in 1994, especially to its committee on population and environment.

(a) Assessing the implications of national demographic trends and factors

5.19. The relationships between demographic trends and factors and environmental change and between environmental degradation and the components of demographic change should be analysed.

5.20. Research should be conducted on how environmental factors interact with socio-economic factors as a cause of migration.

5.21. Vulnerable population groups (such as rural landless workers, ethnic minorities, refugees, migrants, displaced people, women heads of household) whose changes in demographic structure may have specific impacts on sustainable development should be identified.

5.22. An assessment should be made of the implications of the age structure of the population on resource demand and dependency burdens, ranging from educational expenses for the young to health care and support for the elderly, and on household income generation.

5.23. An assessment should also be made of national population carrying capacity in the context of satisfaction of human needs and sustainable development, and special attention should be given to critical resources, such as water and land, and environmental factors, such as ecosystem health and biodiversity.

5.24. The impact of national demographic trends and factors on the traditional livelihoods of indigenous groups and local communities, including changes in traditional land use because of internal population pressures, should be studied.

(b) Building and strengthening a national information base

5.25. National databases on demographic trends and factors and environment should be built and/or strengthened, disaggregating data by ecological region (ecosystem approach), and population/environment profiles should be established by region.

5.26. Methodologies and instruments should be developed to identify areas where sustainability is, or may be, threatened by the environmental effects of demographic trends and factors, incorporating both current and projected demographic data linked to natural environmental processes.

5.27. Case-studies of local level responses by different groups to demographic dynamics should be developed, particularly in areas subject to environmental stress and in deteriorating urban centres.

5.28. Population data should be disaggregated by, *inter alia*, sex and age in order to take into account the implications of the gender division of labour for the use and management of natural resources.

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(c) Incorporating demographic features into policies and plans

5.29. In formulating human settlements policies, account should be taken of resource needs, waste production and ecosystem health.

5.30. The direct and induced effects of demographic changes on environment and development programmes should, where appropriate, be integrated, and the impact on demographic features assessed.

5.31. National population policy goals and programmes that are consistent with national environment and development plans for sustainability and in keeping with the freedom, dignity and personally held values of individuals should be established and implemented.

5.32. Appropriate socio-economic policies for the young and the elderly, both in terms of family and state support systems, should be developed.

5.33. Policies and programmes should be developed for handling the various types of migrations that result from or induce environmental disruptions, with special attention to women and vulnerable groups.

5.34. Demographic concerns, including concerns for environmental migrants and displaced people, should be incorporated in the programmes for sustainable development of relevant international and regional institutions.

5.35. National reviews should be conducted and the integration of population policies in national development and environment strategies should be monitored nationally.

Means of implementation

(a) Financing and cost evaluation

5.36. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $90 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, *inter alia*, the specific strategies and programmes Governments decide upon for implementation.

(b) Raising awareness of demographic and sustainable development interactions

5.37. Understanding of the interactions between demographic trends and factors and sustainable development should be increased in all sectors of society. Stress should be placed on local and national action. Demographic and sustainable development education should be coordinated and integrated in both the formal and non-formal education sectors. Particular attention should be given to population literacy programmes, notably for women. Special emphasis should be placed on the linkage between these programmes, primary environmental care and the provision of primary health care and services.

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(c) Strengthening institutions

5.38. The capacity of national, regional and local structures to deal with issues relating to demographic trends and factors and sustainable development should be enhanced. This would involve strengthening the relevant bodies responsible for population issues to enable them to elaborate policies consistent with the national prospects for sustainable development. Cooperation among government, national research institutions, non-governmental organizations and local communities in assessing problems and evaluating policies should also be enhanced.

5.39. The capacity of the relevant United Nations organs, organizations and bodies, international and regional intergovernmental bodies, non-governmental organizations and local communities should, as appropriate, be enhanced to help countries develop sustainable development policies on request and, as appropriate, provide assistance to environmental migrants and displaced people.

5.40. Inter-agency support for national sustainable development policies and programmes should be improved through better coordination of population and environment activities.

(d) Promoting human resource development

5.41. The international and regional scientific institutions should assist Governments, upon request, to include concerns regarding the population/environment interactions at the global, ecosystem and micro-levels in the training of demographers and population and environment specialists. Training should include research on linkages and ways to design integrated strategies.

C. Implementing integrated environment and development programmes at the local level, taking into account demographic trends and factors

Basis for action

5.42. Population programmes are more effective when implemented together with appropriate cross-sectoral policies. To attain sustainability at the local level, a new framework is needed that integrates demographic trends and factors with such factors as ecosystem health, technology and human settlements, and with socio-economic structures and access to resources. Population programmes should be consistent with socio-economic and environmental planning. Integrated sustainable development programmes should closely correlate action on demographic trends and factors with resource management activities and development goals that meet the needs of the people concerned.

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Objective

5.43. Population programmes should be implemented along with natural resource management and development programmes at the local level that will ensure sustainable use of natural resources, improve the quality of life of the people and enhance environmental quality.

Activities

5.44. Governments and local communities, including community-based women's organizations and national non-governmental organizations, consistent with national plans, objectives, strategies and priorities, could, inter alia, undertake the activities set out below with the assistance and cooperation of international organizations, as appropriate. Governments could share their experience in the implementation of Agenda 21 at the International Conference on Population and Development, to be held in 1994, especially its committee on population and environment.

(a) Developing a framework for action

5.45. An effective consultative process should be established and implemented with concerned groups of society where the formulation and decision-making of all components of the programmes are based on a nationwide consultative process drawing on community meetings, regional workshops and national seminars, as appropriate. This process should ensure that views of women and men on needs, perspective and constraints are equally well reflected in the design of programmes, and that solutions are rooted in specific experience. The poor and underprivileged should be priority groups in this process.

5.46. Nationally determined policies for integrated and multifaceted programmes, with special attention to women, to the poorest people living in critical areas and to other vulnerable groups should be implemented, ensuring the involvement of groups with a special potential to act as agents for change and sustainable development. Special emphasis should be placed on those programmes that achieve multiple objectives, encouraging sustainable economic development, and mitigating adverse impacts of demographic trends and factors, and avoiding long-term environmental damage. Food security, access to secure tenure, basic shelter, and essential infrastructure, education, family welfare, women's reproductive health, family credit schemes, reforestation programmes, primary environmental care, women's employment should, as appropriate, be included among other factors.

5.47. An analytical framework should be developed to identify complementary elements of sustainable development policies as well as the national mechanisms to monitor and evaluate their effects on population dynamics.

5.48. Special attention should be given to the critical role of women in population/environment programmes and in achieving sustainable development. Projects should take advantage of opportunities to link social, economic and environmental gains for women and their families. Empowerment of women is

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essential and should be assured through education, training and policies to accord and improve women's right and access to assets, human and civil rights, labour-saving measures, job opportunities and participation in decision-making. Population/environment programmes must enable women to mobilize themselves to alleviate their burden and improve their capacity to participate in and benefit from socio-economic development. Specific measures should be undertaken to close the gap between female and male illiteracy rates.

(b) Supporting programmes that promote changes in demographic trends and factors towards sustainability

5.49. Reproductive health programmes and services, should, as appropriate, be developed and enhanced to reduce maternal and infant mortality from all causes and enable women and men to fulfil their personal aspirations in terms of family size, in a way in keeping with their freedom and dignity and personally held values.

5.50. Governments should take active steps to implement, as a matter of urgency, in accordance with country-specific conditions and legal systems, measures to ensure that women and men have the same right to decide freely and responsibly on the number and spacing of their children, to have access to the information, education and means, as appropriate, to enable them to exercise this right in keeping with their freedom, dignity and personally held values taking into account ethical and cultural considerations.

5.51. Governments should take active steps to implement programmes to establish and strengthen preventive and curative health facilities that include women-centred, women-managed, safe and effective reproductive health care and affordable, accessible services, as appropriate, for the responsible planning of family size, in keeping with freedom, dignity and personally held values and taking into account ethical and cultural considerations. Programmes should focus on providing comprehensive health care, including pre-natal care, education and information on health and responsible parenthood and should provide the opportunity for all women to breast-feed fully, at least during the first four months post-partum. Programmes should fully support women's productive and reproductive roles and well being, with special attention to the need for providing equal and improved health care for all children and the need to reduce the risk of maternal and child mortality and sickness.

5.52. Consistent with national priorities, culturally based information and education programmes that transmit reproductive health messages to men and women that are easily understood should be developed.

(c) Creating appropriate institutional conditions

5.53. Constituencies and institutional conditions to facilitate the implementation of demographic activities should, as appropriate, be fostered. This requires support and commitment from political, indigenous, religious and

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traditional authorities, the private sector and the national scientific community. In developing these appropriate institutional conditions, countries should closely involve established national machinery for women.

5.54. Population assistance should be coordinated with bilateral and multilateral donors to ensure that population needs and requirements of all developing countries are addressed, fully respecting the overall coordinating responsibility and the choice and strategies of the recipient countries.

5.55. Coordination should be improved at local and international levels. Working practices should be enhanced in order to make optimum use of resources, draw on collective experience and improve the implementation of programmes. UNFPA and other relevant agencies should strengthen the coordination of international cooperation activities with recipient and donor countries in order to ensure that adequate funding is available to respond to growing needs.

5.56. Proposals should be developed for local, national and international population/environment programmes in line with specific needs for achieving sustainability. Where appropriate, institutional changes must be implemented so that old-age security does not entirely depend on input from family members.

Means of implementation

(a) Financing and cost evaluation

5.57. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $7 billion, including about $3.5 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, *inter alia*, the specific strategies and programmes Governments decide upon for implementation.

(b) Research

5.58. Research should be undertaken with a view to developing specific action programmes; it will be necessary to establish priorities between proposed areas of research.

5.59. Socio-demographic research should be conducted on how populations respond to a changing environment.

5.60. Understanding of socio-cultural and political factors that can positively influence acceptance of appropriate population policy instruments should be improved.

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5.61. Surveys of changes in needs for appropriate services relating to responsible planning of family size, reflecting variations among different socio-economic groups and variations in different geographical regions should be undertaken.

(c) Human resource development and capacity-building

5.62. The areas of human resource development and capacity-building, with particular attention to the education and training of women, are areas of critical importance and are a very high priority in the implementation of population programmes.

5.63. Workshops to help programme and projects managers to link population programmes to other development and environmental goals should be conducted.

5.64. Educational materials, including guides/workbooks for planners and decision makers and other actors of population/environment/development programmes, should be developed.

5.65. Cooperation should be developed between Governments, scientific institutions and non-governmental organizations within the region, and similar institutions outside the region. Cooperation with local organizations should be fostered in ordered to raise awareness, engage in demonstration projects and report on the experience gained.

5.66. The recommendations contained in this chapter should in no way prejudice discussions at the International Conference on Population and Development in 1994, which will be the appropriate forum for dealing with population and development issues, taking into account the recommendations of the International Conference on Population, held in Mexico City in 1984, 1/ and the Forward-looking Strategies for the Advancement of Women, 2/ adopted by the World Conference to Review and Appraise the Achievements of the United Decade for Women: Equality, Development and Peace, held in Nairobi in 1985.

Notes

1/ Report of the International Conference on Population, Mexico City, 6-14 August 1984 (United Nations publication. Sales No. E.84.XIII.8), chap. I.

2/ Report of the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development and Peace, Nairobi, 15-26 July 1985 (United Nations publication, Sales No. E.84.IV.10), chap. I, sect. A.

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Chapter 6

PROTECTING AND PROMOTING HUMAN HEALTH

INTRODUCTION

6.1. Health and development are intimately interconnected. Both insufficient development leading to poverty and inappropriate development resulting in overconsumption, coupled with an expanding world population, can result in severe environmental health problems in both developing and developed nations. Action items under Agenda 21 must address the primary health needs of the world's population, since they are integral to the achievement of the goals of sustainable development and primary environmental care. The linkage of health, environmental and socio-economic improvements requires intersectoral efforts. Such efforts, involving education, housing, public works and community groups, including businesses, schools and universities and religious, civic and cultural organizations, are aimed at enabling people in their communities to ensure sustainable development. Particularly relevant is the inclusion of prevention programmes rather than relying solely on remediation and treatment. Countries ought to develop plans for priority actions, drawing on the programme areas in this chapter, which are based on cooperative planning by the various levels of government, non-governmental organizations and local communities. An appropriate international organization, such as WHO, should coordinate these activities.

6.2. The following programme areas are contained in this chapter:

(a) Meeting primary health care needs, particularly in rural areas;

(b) Control of communicable diseases;

(c) Protecting vulnerable groups;

(d) Meeting the urban health challenge;

(e) Reducing health risks from environmental pollution and hazards.

PROGRAMME AREAS

A. Meeting primary health care needs, particularly in rural areas

Basis for action

6.3. Health ultimately depends on the ability to manage successfully the interaction between the physical, spiritual, biological and economic/social environment. Sound development is not possible without a healthy population; yet most developmental activities affect the environment to some degree, which in turn causes or exacerbates many health problems. Conversely, it is the

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very lack of development that adversely affects the health condition of many people, which can be alleviated only through development. The health sector cannot meet basic needs and objectives on its own; it is dependent on social, economic and spiritual development, while directly contributing to such development. It is also dependent on a healthy environment, including the provision of a safe water supply and sanitation and the promotion of a safe food supply and proper nutrition. Particular attention should be directed towards food safety, with priority placed on the elimination of food contamination; comprehensive and sustainable water policies to ensure safe drinking water and sanitation to preclude both microbial and chemical contamination; and promotion of health education, immunization and provision of essential drugs. Education and appropriate services regarding responsible planning of family size, with respect for cultural, religious and social aspects, in keeping with freedom, dignity and personally held values and taking into account ethical and cultural considerations, also contribute to these intersectoral activities.

Objectives

6.4. Within the overall strategy to achieve health for all by the year 2000, the objectives are to meet the basic health needs of rural peri-urban and urban populations; to provide the necessary specialized environmental health services; and to coordinate the involvement of citizens, the health sector, the health-related sectors and relevant non-health sectors (business, social, educational and religious institutions) in solutions to health problems. As a matter of priority, health service coverage should be achieved for population groups in greatest need, particularly those living in rural areas.

Activities

6.5. National Governments and local authorities, with the support of relevant non-governmental organizations and international organizations, in the light of countries' specific conditions and needs, should strengthen their health sector programmes, with special attention to rural needs, to:

(a) Build basic health infrastructures, monitoring and planning systems:

(i) Develop and strengthen primary health care systems that are practical, community-based, scientifically sound, socially acceptable and appropriate to their needs and that meet basic health needs for clean water, safe food and sanitation;

(ii) Support the use and strengthening of mechanisms that improve coordination between health and related sectors at all appropriate levels of government, and in communities and relevant organizations;

(iii) Develop and implement rational and affordable approaches to the establishment and maintenance of health facilities;

(iv) Ensure and, where appropriate, increase provision of social services support;

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(v) Develop strategies, including reliable health indicators, to monitor the progress and evaluate the effectiveness of health programmes;

(vi) Explore ways to finance the health system based on the assessment of the resources needed and identify the various financing alternatives;

(vii) Promote health education in schools, information exchange, technical support and training;

(viii) Support initiatives for self-management of services by vulnerable groups;

(ix) Integrate traditional knowledge and experience into national health systems, as appropriate;

(x) Promote the provisions for necessary logistics for outreach activities, particularly in rural areas;

(xi) Promote and strengthen community-based rehabilitation activities for the rural handicapped.

(b) Support research and methodology development:

(i) Establish mechanisms for sustained community involvement in environmental health activities, including optimization of the appropriate use of community financial and human resources;

(ii) Conduct environmental health research, including behaviour research and research on ways to increase coverage and ensure greater utilization of services by peripheral, underserved and vulnerable populations, as appropriate to good prevention services and health care;

(iii) Conduct research into traditional knowledge of prevention and curative health practices.

Means of implementation

(a) Financing and cost evaluation

6.6. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $40 billion, including about $5 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

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(b) Scientific and technological means

6.7. New approaches to planning and managing health care systems and facilities should be tested, and research on ways of integrating appropriate technologies into health infrastructures supported. The development of scientifically sound health technology should enhance adaptability to local needs and maintainability by community resources, including the maintenance and repair of equipment used in health care. Programmes to facilitate the transfer and sharing of information and expertise should be developed, including communication methods and educational materials.

(c) Human resource development

6.8. Intersectoral approaches to the reform of health personnel development should be strengthened to ensure its relevance to the "Health for All" strategies. Efforts to enhance managerial skills at the district level should be supported, with the aim of ensuring the systematic development and efficient operation of the basic health system. Intensive, short, practical training programmes with emphasis on skills in effective communication, community organization and facilitation of behaviour change should be developed in order to prepare the local personnel of all sectors involved in social development for carrying out their respective roles. In cooperation with the education sector, special health education programmes should be developed focusing on the role of women in the health-care system.

(d) Capacity-building

6.9. Governments should consider adopting enabling and facilitating strategies to promote the participation of communities in meeting their own needs, in addition to providing direct support to the provision of health-care services. A major focus should be the preparation of community-based health and health-related workers to assume an active role in community health education, with emphasis on team work, social mobilization and the support of other development workers. National programmes should cover district health systems in urban, peri-urban and rural areas, the delivery of health programmes at the district level, and the development and support of referral services.

B. Control of communicable diseases

Basis for action

6.10. Advances in the development of vaccines and chemotherapeutic agents have brought many communicable diseases under control. However, there remain many important communicable diseases for which environmental control measures are indispensable, especially in the field of water supply and sanitation. Such diseases include cholera, diarrhoeal diseases, leishmaniasis, malaria and schistosomiasis. In all such instances, the environmental measures, either as an integral part of primary health care or undertaken outside the health sector, form an indispensable component of overall disease control strategies, together with health and hygiene education, and in some cases, are the only component.

6.11. With HIV infection levels estimated to increase to 30-40 million by the year 2000, the socio-economic impact of the pandemic is expected to be devastating for all countries, and increasingly for women and children. While direct health costs will be substantial, they will be dwarfed by the indirect costs of the pandemic - mainly costs associated with the loss of income and decreased productivity of the workforce. The pandemic will inhibit growth of the service and industrial sectors and significantly increase the costs of human capacity-building and retraining. The agricultural sector is particularly affected where production is labour-intensive.

Objectives

6.12. A number of goals have been formulated through extensive consultations in various international forums attended by virtually all Governments, relevant United Nations organizations (including WHO, UNICEF, UNFPA, UNESCO, UNDP and the World Bank) and a number of non-governmental organizations. Goals (including but not limited to those listed below) are recommended for implementation by all countries where they are applicable, with appropriate adaptation to the specific situation of each country in terms of phasing, standards, priorities and availability of resources, with respect for cultural, religious and social aspects, in keeping with freedom, dignity and personally held values and taking into account ethical considerations. Additional goals that are particularly relevant to a country's specific situation should be added in the country's national plan of action (Plan of Action for Implementing the World Declaration on the Survival, Protection and Development of Children in the 1990s). 1/ Such national level action plans should be coordinated and monitored from within the public health sector. Some major goals are:

(a) By the year 2000, to eliminate guinea worm disease (dracunculiasis);

(b) By the year 2000, eradicate polio;

(c) By the year 2000, to effectively control onchocerciasis (river blindness) and leprosy;

(d) By 1995, to reduce measles deaths by 95 per cent and reduce measles cases by 90 per cent compared with pre-immunization levels;

(e) By continued efforts, to provide health and hygiene education and to ensure universal access to safe drinking water and universal access to sanitary measures of excreta disposal, thereby markedly reducing waterborne diseases such as cholera and schistosomiasis and reducing:

(i) By the year 2000, the number of deaths from childhood diarrhoea in developing countries by 50 to 70 per cent;

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(ii) By the year 2000, the incidence of childhood diarrhoea in developing countries by at least 25 to 50 per cent;

(f) By the year 2000, to initiate comprehensive programmes to reduce mortality from acute respiratory infections in children under five years by at least one third, particularly in countries with high infant mortality;

(g) By the year 2000, to provide 95 per cent of the world's child population with access to appropriate care for acute respiratory infections within the community and at first referral level;

(h) By the year 2000, to institute anti-malaria programmes in all countries where malaria presents a significant health problem and maintain the transmission-free status of areas freed from endemic malaria;

(i) By the year 2000, to implement control programmes in countries where major human parasitic infections are endemic and achieve an overall reduction in the prevalence of schistosomiasis and of other trematode infections by 40 per cent and 25 per cent, respectively, from a 1984 baseline, as well as a marked reduction in incidence, prevalence and intensity of filarial infections;

(j) To mobilize and unify national and international efforts against AIDS to prevent infection and to reduce the personal and social impact of HIV infection;

(k) To contain the resurgence of tuberculosis, with particular emphasis on multiple antibiotic resistant forms;

(l) To accelerate research on improved vaccines and implement to the fullest extent possible the use of vaccines in the prevention of disease.

Activities

6.13. Each national Government, in accordance with national plans for public health, priorities and objectives, should consider developing a national health action plan with appropriate international assistance and support, including, at a minimum, the following components:

(a) National public health systems:

(i) Programmes to identify environmental hazards in the causation of communicable diseases;

(ii) Monitoring systems of epidemiological data to ensure adequate forecasting of the introduction, spread or aggravation of communicable diseases;

(iii) Intervention programmes, including measures consistent with the principles of the global AIDS strategy;

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(iv) Vaccines for the prevention of communicable diseases;

(b) Public information and health education:

Provide education and disseminate information on the risks of endemic communicable diseases and build awareness on environmental methods for control of communicable diseases to enable communities to play a role in the control of communicable diseases;

(c) Intersectoral cooperation and coordination:

(i) Second experienced health professionals to relevant sectors, such as planning, housing and agriculture;

(ii) Develop guidelines for effective coordination in the areas of professional training, assessment of risks and development of control technology;

(d) Control of environmental factors that influence the spread of communicable diseases:

Apply methods for the prevention and control of communicable diseases, including water supply and sanitation control, water pollution control, food quality control, integrated vector control, garbage collection and disposal and environmentally sound irrigation practices;

(e) Primary health care system:

(i) Strengthen prevention programmes, with particular emphasis on adequate and balanced nutrition;

(ii) Strengthen early diagnostic programmes and improve capacities for early preventative/treatment action;

(iii) Reduce the vulnerability to HIV infection of women and their offspring;

(f) Support for research and methodology development:

(i) Intensify and expand multidisciplinary research, including focused efforts on the mitigation and environmental control of tropical diseases;

(ii) Carry out intervention studies to provide a solid epidemiological basis for control policies and to evaluate the efficiency of alternative approaches;

(iii) Undertake studies in the population and among health workers to determine the influence of cultural, behavioural and social factors on control policies;

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(g) Development and dissemination of technology:

(i) Develop new technologies for the effective control of communicable diseases;

(ii) Promote studies to determine how to optimally disseminate results from research;

(iii) Ensure technical assistance, including the sharing of knowledge and know-how.

Means of implementation

(a) Financing and cost evaluation

6.14. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $4 billion, including about $900 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

6.15. Efforts to prevent and control diseases should include investigations of the epidemiological, social and economic bases for the development of more effective national strategies for the integrated control of communicable diseases. Cost-effective methods of environmental control should be adapted to local developmental conditions.

(c) Human resource development

6.16. National and regional training institutions should promote broad intersectoral approaches to prevention and control of communicable diseases, including training in epidemiology and community prevention and control, immunology, molecular biology and the application of new vaccines. Health education materials should be developed for use by community workers and for the education of mothers for the prevention and treatment of diarrhoeal diseases in the home.

(d) Capacity-building

6.17. The health sector should develop adequate data on the distribution of communicable diseases, as well as the institutional capacity to respond and collaborate with other sectors for prevention, mitigation and correction of communicable disease hazards through environmental protection. The advocacy at policy- and decision-making levels should be gained, professional and societal support mobilized, and communities organized in developing self-reliance.

C. Protecting vulnerable groups

Basis for action

6.18. In addition to meeting basic health needs, specific emphasis has to be given to protecting and educating vulnerable groups, particularly infants, youth, women, indigenous people and the very poor as a prerequisite for sustainable development. Special attention should also be paid to the health needs of the elderly and disabled population.

6.19. Infants and children. Approximately one third of the world's population are children under 15 years old. At least 15 million of these children die annually from such preventable causes as birth trauma, birth asphyxia, acute respiratory infections, malnutrition, communicable diseases and diarrhoea. The health of children is affected more severely than other population groups by malnutrition and adverse environmental factors, and many children risk exploitation as cheap labour or in prostitution.

6.20. Youth. As has been the historical experience of all countries, youth are particularly vulnerable to the problems associated with economic development, which often weakens traditional forms of social support essential for the healthy development, of young people. Urbanization and changes in social mores have increased substance abuse, unwanted pregnancy and sexually transmitted diseases, including AIDS. Currently more than half of all people alive are under the age of 25, and four of every five live in developing countries. Therefore it is important to ensure that historical experience is not replicated.

6.21. Women. In developing countries, the health status of women remains relatively low, and during the 1980s poverty, malnutrition and general ill-health in women were even rising. Most women in developing countries still do not have adequate basic educational opportunities and they lack the means of promoting their health, responsibly controlling their reproductive life and improving their socio-economic status. Particular attention should be given to the provision of pre-natal care to ensure healthy babies.

6.22. Indigenous people and their communities. Indigenous people had their communities make up a significant percentage of global population. The outcomes of their experience have tended to be very similar in that the basis of their relationship with traditional lands has been fundamentally changed. They tend to feature disproportionately in unemployment, lack of housing, poverty and poor health. In many countries the number of indigenous people is growing faster than the general population. Therefore it is important to target health initiatives for indigenous people.

Objectives

6.23. The general objectives of protecting vulnerable groups are to ensure that all such individuals should be allowed to develop to their full potential (including healthy physical, mental and spiritual development); to ensure that

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young people can develop, establish and maintain healthy lives; to allow women to perform their key role in society; and to support indigenous people through educational, economic and technical opportunities.

6.24. Specific major goals for child survival, development and protection were agreed upon at the World Summit for Children and remain valid also for Agenda 21. Supporting and sectoral goals cover women's health and education, nutrition, child health, water and sanitation, basic education and children in difficult circumstances.

6.25. Governments should take active steps to implement, as a matter of urgency, in accordance with country specific conditions and legal systems, measures to ensure that women and men have the same right to decide freely and responsibly on the number and spacing of their children, to have access to the information, education and means, as appropriate, to enable them to exercise this right in keeping with their freedom, dignity and personally held values, taking into account ethical and cultural considerations.

6.26. Governments should take active steps to implement programmes to establish and strengthen preventive and curative health facilities which include women-centred, women-managed, safe and effective reproductive health care and affordable, accessible services, as appropriate, for the responsible planning of family size, in keeping with freedom, dignity and personally held values and taking into account ethical and cultural considerations. Programmes should focus on providing comprehensive health care, including pre-natal care, education and information on health and responsible parenthood and should provide the opportunity for all women to breast-feed fully, at least during the first four months post-partum. Programmes should fully support women's productive and reproductive roles and well being, with special attention to the need for providing equal and improved health care for all children and the need to reduce the risk of maternal and child mortality and sickness.

Activities

6.27. National Governments, in cooperation with local and non-governmental organizations, should initiate or enhance programmes in the following areas:

(a) Infants and children:

(i) Strengthen basic health-care services for children in the context of primary health-care delivery, including prenatal care, breast-feeding, immunization and nutrition programmes;

(ii) Undertake widespread adult education on the use of oral rehydration therapy for diarrhoea, treatment of respiratory infections and prevention of communicable diseases;

(iii) Promote the creation, amendment and enforcement of a legal framework protecting children from sexual and workplace exploitation;

(iv) Protect children from the effects of environmental and occupational toxic compounds;

(b) Youth:

Strengthen services for youth in health, education and social sectors in order to provide better information, education, counselling and treatment for specific health problems, including drug abuse;

(c) Women:

(i) Involve women's groups in decision-making at the national and community levels to identify health risks and incorporate health issues in national action programmes on women and development;

(ii) Provide concrete incentives to encourage and maintain attendance of women of all ages at school and adult education courses, including health education and training in primary, home and maternal health care;

(iii) Carry out baseline surveys and knowledge, attitude and practice studies on the health and nutrition of women throughout their life cycle, especially as related to the impact of environmental degradation and adequate resources;

(d) Indigenous people and their communities:

(i) Strengthen, through resources and self-management, preventative and curative health services;

(ii) Integrate traditional knowledge and experience into health systems.

Means of implementation

(a) Financing and cost evaluation

6.28. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $3.7 billion, including about $400 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, *inter alia*, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

6.29. Educational, health and research institutions should be strengthened to provide support to improve the health of vulnerable groups. Social research on the specific problems of these groups should be expanded and methods for implementing flexible pragmatic solutions explored, with emphasis on preventive measures. Technical support should be provided to Governments, institutions and non-governmental organizations for youth, women and indigenous people in the health sector.

(c) Human resources development

6.30. The development of human resources for the health of children, youth and women should include reinforcement of educational institutions, promotion of interactive methods of education for health and increased use of mass media in disseminating information to the target groups. This requires the training of more community health workers, nurses, midwives, physicians, social scientists and educators, the education of mothers, families and communities and the strengthening of ministries of education, health, population etc.

(d) Capacity-building

6.31. Governments should promote, where necessary: (i) the organization of national, intercountry and interregional symposia and other meetings for the exchange of information among agencies and groups concerned with the health of children, youth, women and indigenous people, and (ii) women's organizations, youth groups and indigenous people's organizations to facilitate health and consult them on the creation, amendment and enforcement of legal frameworks to ensure a healthy environment for children, youth, women and indigenous peoples.

D. Meeting the urban health challenge

Basis for action

6.32. For hundreds of millions of people, the poor living conditions in urban and peri-urban areas are destroying lives, health, and social and moral values. Urban growth has outstripped society's capacity to meet human needs, leaving hundreds of millions of people with inadequate incomes, diets, housing and services. Urban growth exposes populations to serious environmental hazards and has outstripped the capacity of municipal and local governments to provide the environmental health services that the people need. All too often, urban development is associated with destructive effects on the physical environment and the resource base needed for sustainable development. Environmental pollution in urban areas is associated with excess morbidity and mortality. Overcrowding and inadequate housing contribute to respiratory diseases, tuberculosis, meningitis and other diseases. In urban environments, many factors that affect human health are outside the health sector. Improvements in urban health therefore will depend on coordinated action by all levels of government, health care providers, businesses, religious groups, social and educational institutions and citizens.

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Objectives

6.33. The health and well-being of all urban dwellers must be improved so that they can contribute to economic and social development. The global objective is to achieve a 10 to 40 per cent improvement in health indicators by the year 2000. The same rate of improvement should be achieved for environmental, housing and health service indicators. These include the development of quantitative objectives for infant mortality, maternal mortality, percentage of low birth weight newborns and specific indicators (e.g. tuberculosis as an indicator of crowded housing, diarrhoeal diseases as indicators of inadequate water and sanitation, rates of industrial and transportation accidents that indicate possible opportunities for prevention of injury, and social problems such as drug abuse, violence and crime that indicate underlying social disorders).

Activities

6.34. Local authorities, with the appropriate support of national Governments and international organizations should be encouraged to take effective measures to initiate or strengthen the following activities:

(a) Develop and implement municipal and local health plans:

(i) Establish or strengthen intersectoral committees at both the political and technical level, including active collaboration on linkages with scientific, cultural, religious, medical, business, social and other city institutions, using networking arrangements;

(ii) Adopt or strengthen municipal or local "enabling strategies" that emphasize "doing with" rather than "doing for" and create supportive environments for health;

(iii) Ensure that public health education in schools, workplace, mass media etc. is provided or strengthened;

(iv) Encourage communities to develop personal skills and awareness of primary health care;

(v) Promote and strengthen community-based rehabilitation activities for the urban and peri-urban disabled and the elderly;

(b) Survey, where necessary, the existing health, social and environmental conditions in cities, including documentation of intra-urban differences;

(c) Strengthen environmental health services:

(i) Adopt health impact and environmental impact assessment procedures;

(ii) Provide basic and in-service training for new and existing personnel;

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(d) Establish and maintain city networks for collaboration and exchange of models of good practice.

Means of implementation

(a) Financing and cost evaluation

6.35. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $222 million, including about $22 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, *inter alia*, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

6.36. Decision-making models should be further developed and more widely used to assess the costs and the health and environment impacts of alternative technologies and strategies. Improvement in urban development and management requires better national and municipal statistics based on practical, standardized indicators. Development of methods is a priority for the measurement of intra-urban and intra-district variations in health status and environmental conditions, and for the application of this information in planning and management.

(c) Human resources development

6.37. Programmes must supply the orientation and basic training of municipal staff required for the healthy city processes. Basic and in-service training of environmental health personnel will also be needed.

(d) Capacity-building

6.38. The programme is aimed towards improved planning and management capabilities in the municipal and local government and its partners in central Government, the private sector and universities. Capacity development should be focused on obtaining sufficient information, improving coordination mechanisms linking all the key actors, and making better use of available instruments and resources for implementation.

E. Reducing health risks from environmental pollution and hazards

Basis for action

6.39. In many locations around the world the general environment (air, water and land), workplaces and even individual dwellings are so badly polluted that the health of hundreds of millions of people is adversely affected. This is,

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inter alia, due to past and present developments in consumption and production patterns and lifestyles, in energy production and use, in industry, in transportation etc., with little or no regard for environmental protection. There have been notable improvements in some countries, but deterioration of the environment continues. The ability of countries to tackle pollution and health problems is greatly restrained because of lack of resources. Pollution control and health protection measures have often not kept pace with economic development. Considerable development-related environmental health hazards exist in the newly industrializing countries. Furthermore, the recent analysis of WHO has clearly established the interdependence among the factors of health, environment and development and has revealed that most countries are lacking such integration as would lead to an effective pollution control mechanism. 2/ Without prejudice to such criteria as may be agreed upon by the international community, or to standards which will have to be determined nationally, it will be essential in all cases to consider the systems of values prevailing in each country and the extent of the applicability of standards that are valid for the most advanced countries but may be inappropriate and of unwarranted social cost for the developing countries.

Objectives

6.40. The overall objective is to minimize hazards and maintain the environment to a degree that human health and safety is not impaired or endangered and yet encourage development to proceed. Specific programme objectives are:

(a) By the year 2000, to incorporate appropriate environmental and health safeguards as part of national development programmes in all countries;

(b) By the year 2000, to establish, as appropriate, adequate national infrastructure and programmes for providing environmental injury, hazard surveillance and the basis for abatement in all countries;

(c) By the year 2000, to establish, as appropriate, integrated programmes for tackling pollution at the source and at the disposal site, with a focus on abatement actions in all countries;

(d) To identify and compile, as appropriate, the necessary statistical information on health effects to support cost/benefit analysis, including environmental health impact assessment for pollution control, prevention and abatement measures.

Activities

6.41. Nationally determined action programmes, with international assistance, support and coordination, where necessary, in this area should include:

(a) Urban air pollution:

(i) Develop appropriate pollution control technology on the basis of risk assessment and epidemiological research for the introduction of environmentally sound production processes and suitable safe mass transport;

(ii) Develop air pollution control capacities in large cities, emphasizing enforcement programmes and using monitoring networks, as appropriate;

(b) Indoor air pollution:

(i) Support research and develop programmes for applying prevention and control methods to reducing indoor air pollution, including the provision of economic incentives for the installation of appropriate technology;

(ii) Develop and implement health education campaigns, particularly in developing countries, to reduce the health impact of domestic use of biomass and coal;

(c) Water pollution:

(i) Develop appropriate water pollution control technologies on the basis of health risk assessment;

(ii) Develop water pollution control capacities in large cities;

(d) Pesticides:

Develop mechanisms to control the distribution and use of pesticides in order to minimize the risks to human health by transportation, storage, application and residual effects of pesticides used in agriculture and preservation of wood;

(e) Solid waste:

(i) Develop appropriate solid waste disposal technologies on the basis of health risk assessment;

(ii) Develop appropriate solid waste disposal capacities in large cities;

(f) Human settlements:

Develop programmes for improving health conditions in human settlements, in particular within slums and non-tenured settlements, on the basis of health risk assessment;

(g) Noise:

Develop criteria for maximum permitted safe noise exposure levels and promote noise assessment and control as part of environmental health programmes;

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(h) Ionizing and non-ionizing radiation:

Develop and implement appropriate national legislation, standards and enforcement procedures on the basis of existing international guidelines;

(i) Effects of ultraviolet radiation:

Undertake, as a matter of urgency, research on the effects on human health of the increasing ultraviolet radiation reaching the earth's surface as a consequence of depletion of the stratospheric ozone layer;

(ii) On the basis of the outcome of this research, consider taking appropriate remedial measures to mitigate the above-mentioned effects on human beings;

(j) Industry and energy production:

(i) Establish environmental health impact assessment procedures for the planning and development of new industries and energy facilities;

(ii) Incorporate appropriate health risk analysis in all national programmes for pollution control and management, with particular emphasis on toxic compounds such as lead;

(iii) Establish industrial hygiene programmes in all major industries for the surveillance of workers' exposure to health hazards;

(iv) Promote the introduction of environmentally sound technologies within the industry and energy sectors;

(k) Monitoring and assessment:

Establish, as appropriate, adequate environmental monitoring capacities for the surveillance of environmental quality and the health status of populations;

(l) Injury monitoring and reduction:

(i) Support, as appropriate, the development of systems to monitor the incidence and cause of injury to allow well-targeted intervention/prevention strategies;

(ii) Develop, in accordance with national plans, strategies in all sectors (industry, traffic and others) consistent with the WHO safe cities and safe communities programmes, to reduce the frequency and severity of injury;

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(iii) Emphasize preventive strategies to reduce occupationally derived diseases and diseases caused by environmental and occupational toxins to enhance worker safety;

(m) Research promotion and methodology development:

(i) Support the development of new methods for the quantitative assessment of health benefits and cost associated with different pollution control strategies;

(ii) Develop and carry out interdisciplinary research on the combined health effects of exposure to multiple environmental hazards, including epidemiological investigations of long-term exposures to low levels of pollutants and the use of biological markers capable of estimating human exposures, adverse effects and susceptibility to environmental agents.

Means of implementation

(a) Financing and cost evaluation

6.42. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $3 billion, including about $115 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, *inter alia*, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

6.43. Although technology to prevent or abate pollution is readily available for a large number of problems, for programme and policy development countries should undertake research within an intersectoral framework. Such efforts should include collaboration with the business sector. Cost/effect analysis and environmental impact assessment methods should be developed through cooperative international programmes and applied to the setting of priorities and strategies in relation to health and development.

6.44. In the activities listed in paragraph 6.41 (a) to (m) above, developing country efforts should be facilitated by access to and transfer of technology, know-how and information, from the repositories of such knowledge and technologies, in conformity with chapter 34.

(c) Human resource development

6.45. Comprehensive national strategies should be designed to overcome the lack of qualified human resources, which is a major impediment to progress in dealing with environmental health hazards. Training should include environmental and health officials at all levels from managers to inspectors. More emphasis needs to be placed on including the subject of environmental health in the curricula of secondary schools and universities and on educating the public.

(d) Capacity-building

6.46. Each country should develop the knowledge and practical skills to foresee and identify environmental health hazards, and the capacity to reduce the risks. Basic capacity requirements must include knowledge about environmental health problems and awareness on the part of leaders, citizens and specialists; operational mechanisms for intersectoral and intergovernmental cooperation in development planning and management and in combating pollution; arrangements for involving private and community interests in dealing with social issues; delegation of authority and distribution of resources to intermediate and local levels of government to provide front-line capabilities to meet environmental health needs.

Notes

1/ A/45/625, annex.

2/ Report of the WHO Commission on Health and Environment (Geneva, forthcoming).

Chapter 7

PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT

INTRODUCTION

7.1. In industrialized countries, the consumption patterns of cities are severely stressing the global ecosystem, while settlements in the developing world need more raw material, energy, and economic development simply to overcome basic economic and social problems. Human settlement conditions in many parts of the world, particularly the developing countries, are deteriorating mainly as a result of the low levels of investment in the sector attributable to the overall resource constraints in these countries. In the low-income countries for which recent data are available, an average of only 5.6 per cent of central government expenditure went to housing, amenities, social security and welfare. 1/ Expenditure by international support and finance organizations is equally low. For example, only 1 per cent of the United Nations system's total grant-financed expenditures in 1988 went to human settlements, 2/ while in 1991, loans from the World Bank and the International Development Association (IDA) for urban development and water supply and sewerage amounted to 5.5 and 5.4 per cent, respectively, of their total lending. 3/

7.2. On the other hand, available information indicates that technical cooperation activities in the human settlement sector generate considerable public and private sector investment. For example, every dollar of UNDP technical cooperation expenditure on human settlements in 1988 generated a follow-up investment of $122, the highest of all UNDP sectors of assistance. 4/

7.3. This is the foundation of the "enabling approach" advocated for the human settlement sector. External assistance will help to generate the internal resources needed to improve the living and working environments of all people by the year 2000 and beyond, including the growing number of unemployed - the no-income group. At the same time the environmental implications of urban development should be recognized and addressed in an integrated fashion by all countries, with high priority being given to the needs of the urban and rural poor, the unemployed and the growing number of people without any source of income.

Human settlement objective

7.4. The overall human settlement objective is to improve the social, economic and environmental quality of human settlements and the living and working environments of all people, in particular the urban and rural poor. Such improvement should be based on technical cooperation activities, partnerships among the public, private and community sectors and participation in the decision-making process by community groups and special interest groups such as women, indigenous people, the elderly and the disabled. These approaches should form the core principles of national settlement strategies. In developing these strategies, countries will need to set priorities among

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the eight programme areas in this chapter in accordance with their national plans and objectives, taking fully into account their social and cultural capabilities. Furthermore, countries should make appropriate provision to monitor the impact of their strategies on marginalized and disenfranchised groups, with particular reference to the needs of women.

7.5. The programme areas included in this chapter are:

(a) Providing adequate shelter for all;

(b) Improving human settlement management;

(c) Promoting sustainable land-use planning and management;

(d) Promoting the integrated provision of environmental infrastructure: water, sanitation, drainage and solid-waste management;

(e) Promoting sustainable energy and transport systems in human settlements;

(f) Promoting human settlement planning and management in disaster-prone areas;

(g) Promoting sustainable construction industry activities;

(h) Promoting human resource development and capacity-building for human settlement development.

PROGRAMME AREAS

A. Providing adequate shelter for all

Basis for action

7.6. Access to safe and healthy shelter is essential to a person's physical, psychological, social and economic well-being and should be a fundamental part of national and international action. The right to adequate housing as a basic human right is enshrined in the Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights. Despite this, it is estimated that at the present time, at least 1 billion people do not have access to safe and healthy shelter and that if appropriate action is not taken, this number will increase dramatically by the end of the century and beyond.

7.7. A major global programme to address this problem is the Global Strategy for Shelter to the Year 2000, adopted by the General Assembly in December 1988 (resolution 43/181, annex). Despite its widespread endorsement, th Strategy needs a much greater level of political and financial support to enable it to reach its goal of facilitating adequate shelter for all by the end of the century and beyond.

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Objective

7.8. The objective is to achieve adequate shelter for rapidly growing populations and for the currently deprived urban and rural poor through an enabling approach to shelter development and improvement that is environmentally sound.

Activities

7.9. The following activities should be undertaken:

(a) As a first step towards the goal of providing adequate shelter for all, all countries should take immediate measures to provide shelter to their homeless poor, while the international community and financial institutions should undertake actions to support the efforts of the developing countries to provide shelter to the poor;

(b) All countries should adopt and/or strengthen national shelter strategies, with targets based, as appropriate, on the principles and recommendations contained in the Global Strategy for Shelter to the Year 2000. People should be protected by law against unfair eviction from their homes or land;

(c) All countries should, as appropriate, support the shelter efforts of the urban and rural poor, the unemployed and the no-income group by adopting and/or adapting existing codes and regulations, to facilitate their access to land, finance and low-cost building materials and by actively promoting the regularization and upgrading of informal settlements and urban slums as an expedient measure and pragmatic solution to the urban shelter deficit;

(d) All countries should, as appropriate, facilitate access of urban and rural poor to shelter by adopting and utilizing housing and finance schemes and new innovative mechanisms adapted to their circumstances;

(e) All countries should support and develop environmentally compatible shelter strategies at national, state/provincial and municipal levels through partnerships among the private, public and community sectors and with the support of community-based organizations;

(f) All countries, especially developing ones, should, as appropriate, formulate and implement programmes to reduce the impact of the phenomenon of rural to urban drift by improving rural living conditions;

(g) All countries, where appropriate, should develop and implement resettlement programmes that address the specific problems of displaced populations in their respective countries;

(h) All countries should, as appropriate, document and monitor the implementation of their national shelter strategies by using, inter alia, the monitoring guidelines adopted by the Commission on Human Settlements and the

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shelter performance indicators being produced jointly by the United Nations Centre for Human Settlements (Habitat) and the World Bank;

(i) Bilateral and multilateral cooperation should be strengthened in order to support the implementation of the national shelter strategies of developing countries;

(j) Global progress reports covering national action and the support activities of international organizations and bilateral donors should be produced and disseminated on a biennial basis, as requested in the Global Strategy for Shelter to the Year 2000.

Means of implementation

(a) Financing and cost evaluation

7.10. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $75 billion, including about $10 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, *inter alia*, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

7.11. The requirements under this heading are addressed in each of the other programme areas included in the present chapter.

(c) Human resource development and capacity-building

7.12. Developed countries and funding agencies should provide specific assistance to developing countries in adopting an enabling approach to the provision of shelter for all, including the no-income group, and covering research institutions and training activities for government officials, professionals, communities and non-governmental organizations and by strengthening local capacity for the development of appropriate technologies.

B. Improving human settlement management

Basis for action

7.13. By the turn of the century, the majority of the world's population will be living in cities. While urban settlements, particularly in developing countries, are showing many of the symptoms of the global environment and development crisis, they nevertheless generate 60 per cent of gross national product and, if properly managed, can develop the capacity to sustain their productivity, improve the living conditions of their residents and manage natural resources in a sustainable way.

7.14. Some metropolitan areas extend over the boundaries of several political and/or administrative entities (counties and municipalities) even though they conform to a continuous urban system. In many cases this political heterogeneity hinders the implementation of comprehensive environmental management programmes.

Objective

7.15. The objective is to ensure sustainable management of all urban settlements, particularly in developing countries, in order to enhance their ability to improve the living conditions of residents, especially the marginalized and disenfranchised, thereby contributing to the achievement of national economic development goals.

Activities

(a) Improving urban management

7.16. One existing framework for strengthening management is in the United Nations Development Programme/World Bank/United Nations Centre for Human Settlements (Habitat) Urban Management Programme (UMP), a concerted global effort to assist developing countries in addressing urban management issues. Its coverage should be extended to all interested countries during the period 1993-2000. All countries should, as appropriate and in accordance with national plans, objectives and priorities and with the assistance of non-governmental organizations and representatives of local authorities, undertake the following activities at the national, state/provincial and local levels, with the assistance of relevant programmes and support agencies:

(a) Adopting and applying urban management guidelines in the areas of land management, urban environmental management, infrastructure management and municipal finance and administration;

(b) Accelerating efforts to reduce urban poverty through a number of actions, including:

(i) Generating employment for the urban poor, particularly women, through the provision, improvement and maintenance of urban infrastructure and services and the support of economic activities in the informal sector, such as repairs, recycling, services and small commerce;

(ii) Providing specific assistance to the poorest of the urban poor through, *inter alia*, the creation of social infrastructure in order to reduce hunger and homelessness, and the provision of adequate community services;

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(iii) Encouraging the establishment of indigenous community-based organizations, private voluntary organizations and other forms of non-governmental entities that can contribute to the efforts to reduce poverty and improve the quality of life for low-income families;

(c) Adopting innovative city planning strategies to address environmental and social issues by:

(i) Reducing subsidies on, and recovering the full costs of, environmental and other services of high standard (e.g. water supply, sanitation, waste collection, roads, telecommunications) provided to higher income neighbourhoods;

(ii) Improving the level of infrastructure and service provision in poorer urban areas;

(d) Developing local strategies for improving the quality of life and the environment, integrating decisions on land use and land management, investing in the public and private sectors and mobilizing human and material resources, thereby promoting employment generation that is environmentally sound and protective of human health.

(b) Strengthening urban data systems

7.17. During the period 1993-2000 all countries should undertake, with the active participation of the business sector as appropriate, pilot projects in selected cities for the collection, analysis and subsequent dissemination of urban data, including environmental impact analysis, at the local, state/provincial, national and international levels and the establishment of city data management capabilities. 5/ United Nations organizations, such as Habitat, UNEP and UNDP, could provide technical advice and model data management systems.

(c) Encouraging intermediate city development

7.18. In order to relieve pressure on large urban agglomerations of developing countries, policies and strategies should be implemented towards the development of intermediate cities that create employment opportunities for unemployed labour in the rural areas and support rural-based economic activities, although sound urban management is essential to ensure that urban sprawl does not expand resource degradation over an ever wider land area and increase pressures to convert open space and agricultural/buffer lands for development.

7.19. Therefore all countries should, as appropriate, conduct reviews of urbanization processes and policies in order to assess the environmental impacts of growth and apply urban planning and management approaches specifically suited to the needs, resource capabilities and characteristics of their growing intermediate-sized cities. As appropriate, they should also

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concentrate on activities aimed at facilitating the transition from rural to urban lifestyles and settlement patterns and at promoting the development of small-scale economic activities, particularly the production of food, to support local income generation and the production of intermediate goods and services for rural hinterlands.

7.20. All cities, particularly those characterized by severe sustainable development problems, should, in accordance with national laws, rules and regulations, develop and strengthen programmes aimed at addressing such problems and guiding their development along a sustainable path. Some international initiatives in support of such efforts, as in the Sustainable Cities Programme of Habitat and the Healthy Cities Programme of WHO, should be intensified. Additional initiatives involving the World Bank, the regional development banks and bilateral agencies, as well as other interested stakeholders, particularly international and national representatives of local authorities, should be strengthened and coordinated. Individual cities should, as appropriate:

(a) Institutionalize a participatory approach to sustainable urban development, based on a continuous dialogue between the actors involved in urban development (the public sector, private sector and communities), especially women and indigenous people;

(b) Improve the urban environment by promoting social organization and environmental awareness through the participation of local communities in the identification of public services needs, the provision of urban infrastructure, the enhancement of public amenities and the protection and/or rehabilitation of older buildings, historic precincts and other cultural artifacts. In addition, "green works" programmes should be activated to create self-sustaining human development activities and both formal and informal employment opportunities for low-income urban residents;

(c) Strengthen the capacities of their local governing bodies to deal more effectively with the broad range of developmental and environmental challenges associated with rapid and sound urban growth through comprehensive approaches to planning that recognize the individual needs of cities and are based on ecologically sound urban design practices;

(d) Participate in international "sustainable city networks" to exchange experiences and mobilize national and international technical and financial support;

(e) Promote the formulation of environmentally sound and culturally sensitive tourism programmes as a strategy for sustainable development of urban and rural settlements and as a way of decentralizing urban development and reducing discrepancies among regions;

(f) Establish mechanisms, with the assistance of relevant international agencies, to mobilize resources for local initiatives to improve environmental quality;

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(g) Empower community groups, non-governmental organizations and individuals to assume the authority and responsibility for managing and enhancing their immediate environment through participatory tools, techniques and approaches embodied in the concept of environmental care.

7.21. Cities of all countries should reinforce cooperation among themselves and cities of the developed countries, under the aegis of non-governmental organizations active in this field, such as the International Union of Local Authorities (IULA), the International Council for Local Environmental Initiatives (ICLEI) and the World Federation of Twin Cities.

Means of implementation

(a) Financing and cost evaluation

7.22. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $100 billion, including about $15 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, *inter alia*, the specific strategies and programmes Governments decide upon for implementation.

(b) Human resource development and capacity-building

7.23. Developing countries should, with appropriate international assistance, consider focusing on training and developing a cadre of urban managers, technicians, administrators and other relevant stakeholders who can successfully manage environmentally sound urban development and growth and are equipped with the skills necessary to analyse and adapt the innovative experiences of other cities. For this purpose, the full range of training methods - from formal education to the use of the mass media - should be utilized, as well as the "learning by doing" option.

7.24. Developing countries should also encourage technological training and research through joint efforts by donors, non-governmental organizations and private business in such areas as the reduction of waste, water quality, saving of energy, safe production of chemicals and less polluting transportation.

7.25. Capacity-building activities carried out by all countries, assisted as suggested above, should go beyond the training of individuals and functional groups to include institutional arrangements, administrative routines, inter-agency linkages, information flows and consultative processes.

7.26. In addition, international efforts, such as the Urban Management Programme, in cooperation with multilateral and bilateral agencies, should continue to assist the developing countries in their efforts to develop a participatory structure by mobilizing the human resources of the private

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sector, non-governmental organizations and the poor, particularly women and the disadvantaged.

C. Promoting sustainable land-use planning and management

Basis for action

7.27. Access to land resources is an essential component of sustainable low-impact lifestyles. Land resources are the basis for (human) living systems and provide soil, energy, water and the opportunity for all human activity. In rapidly growing urban areas, access to land is rendered increasingly difficult by the conflicting demands of industry, housing, commerce, agriculture, land tenure structures and the need for open spaces. Furthermore, the rising costs of urban land prevent the poor from gaining access to suitable land. In rural areas, unsustainable practices, such as the exploitation of marginal lands and the encroachment on forests and ecologically fragile areas by commercial interests and landless rural populations, result in environmental degradation, as well as in diminishing returns for impoverished rural settlers.

Objective

7.28. The objective is to provide for the land requirements of human settlement development through environmentally sound physical planning and land use so as to ensure access to land to all households and, where appropriate, the encouragement of communally and collectively owned and managed land. 6/ Particular attention should be paid to the needs of women and indigenous people for economic and cultural reasons.

Activities

7.29. All countries should consider, as appropriate, undertaking a comprehensive national inventory of their land resources in order to establish a land information system in which land resources will be classified according to their most appropriate uses and environmentally fragile or disaster-prone areas will be identified for special protection measures.

7.30. Subsequently, all countries should consider developing national land-resource management plans to guide land-resource development and utilization and, to that end, should:

(a) Establish, as appropriate, national legislation to guide the implementation of public policies for environmentally sound urban development, land utilization, housing and for the improved management of urban expansion;

(b) Create, where appropriate, efficient and accessible land markets that meet community development needs by, inter alia, improving land registry systems and streamlining procedures in land transactions;

(c) Develop fiscal incentives and land-use control measures, including land-use planning solutions for a more rational and environmentally sound use of limited land resources;

(d) Encourage partnerships among the public, private and community sectors in managing land resources for human settlements development;

(e) Strengthen community-based land-resource protection practices in existing urban and rural settlements;

(f) Establish appropriate forms of land tenure that provide security of tenure for all land-users, especially indigenous people, women, local communities, the low-income urban dwellers and the rural poor;

(g) Accelerate efforts to promote access to land by the urban and rural poor, including credit schemes for the purchase of land and for building/acquiring or improving safe and healthy shelter and infrastructure services;

(h) Develop and support the implementation of improved land-management practices that deal comprehensively with potentially competing land requirements for agriculture, industry, transport, urban development, green spaces, preserves and other vital needs;

(i) Promote understanding among policy makers of the adverse consequences of unplanned settlements in environmentally vulnerable areas and of the appropriate national and local land-use and settlements policies required for this purpose.

7.31. At the international level, global coordination of land-resource management activities should be strengthened by the various bilateral and multilateral agencies and programmes, such as UNDP, FAO, the World Bank, the regional development banks, other interested organizations and the UNDP/World Bank/Habitat Urban Management Programme, and action should be taken to promote the transfer of applicable experience on sustainable land-management practices to and among developing countries.

Means of implementation

(a) Financing and cost evaluation

7.32. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $3 billion, including about $300 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

7.33. All countries, particularly developing countries, alone or in regional or subregional groupings, should be given access to modern techniques of land-resource management, such as geographical information systems, satellite photography/imagery and other remote-sensing technologies.

(c) Human resource development and capacity-building

7.34. Environmentally focused training activities in sustainable land-resources planning and management should be undertaken in all countries, with developing countries being given assistance through international support and funding agencies in order to:

(a) Strengthen the capacity of national, state/provincial and local educational research and training institutions to provide formal training of land-management technicians and professionals;

(b) Facilitate the organizational review of government ministries and agencies responsible for land questions, in order to devise more efficient mechanisms of land-resource management, and carry out periodic in-service refresher courses for the managers and staff of such ministries and agencies in order to familiarize them with up-to-date land-resource-management technologies;

(c) Where appropriate, provide such agencies with modern equipment, such as computer hardware and software and survey equipment;

(d) Strengthen existing programmes and promote an international and interregional exchange of information and experience in land management through the establishment of professional associations in land-management sciences and related activities, such as workshops and seminars.

D. Promoting the integrated provision of environmental infrastructure: water, sanitation, drainage and solid-waste management

Basis for action

7.35. The sustainability of urban development is defined by many parameters relating to the availability of water supplies, air quality and the provision of environmental infrastructure for sanitation and waste management. As a result of the density of users, urbanization, if properly managed, offers unique opportunities for the supply of sustainable environmental infrastructure through adequate pricing policies, educational programmes and equitable access mechanisms that are economically and environmentally sound. In most developing countries, however, the inadequacy and lack of environmental infrastructure is responsible for widespread ill-health and a large number of preventable deaths each year. In those countries conditions

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are set to worsen due to growing needs that exceed the capacity of Governments to respond adequately.

7.36. An integrated approach to the provision of environmentally sound infrastructure in human settlements, in particular for the urban and rural poor, is an investment in sustainable development that can improve the quality of life, increase productivity, improve health and reduce the burden of investments in curative medicine and poverty alleviation.

7.37. Most of the activities whose management would be improved by an integrated approach, are covered in Agenda 21 as follows: chapter 6 (Protecting and promoting human health conditions), chapters 9 (Protecting the atmosphere), 18 (Protecting the quality and supply of freshwater resources) and 21 (Environmentally sound management of solid wastes and sewage-related issues).

Objective

7.38. The objective is to ensure the provision of adequate environmental infrastructure facilities in all settlements by the year 2025. The achievement of this objective would require that all developing countries incorporate in their national strategies programmes to build the necessary technical, financial and human resource capacity aimed at ensuring better integration of infrastructure and environmental planning by the year 2000.

Activities

7.39. All countries should assess the environmental suitability of infrastructure in human settlements, develop national goals for sustainable management of waste, and implement environmentally sound technology to ensure that the environment, human health and quality of life are protected. Settlement infrastructure and environmental programmes designed to promote an integrated human settlements approach to the planning, development, maintenance and management of environmental infrastructure (water supply, sanitation, drainage, solid-waste management) should be strengthened with the assistance of bilateral and multilateral agencies. Coordination among these agencies and with collaboration from international and national representatives of local authorities, the private sector and community groups should also be strengthened. The activities of all agencies engaged in providing environmental infrastructure should, where possible, reflect an ecosystem or metropolitan area approach to settlements and should include monitoring, applied research, capacity-building, transfer of appropriate technology and technical cooperation among the range of programme activities.

7.40. Developing countries should be assisted at the national and local levels in adopting an integrated approach to the provision of water supply, energy, sanitation, drainage and solid-waste management, and external funding agencies should ensure that this approach is applied in particular to environmental infrastructure improvement in informal settlements based on regulations and standards that take into account the living conditions and resources of the communities to be served.

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7.41. All countries should, as appropriate, adopt the following principles for the provision of environmental infrastructure:

(a) Adopt policies that minimize if not altogether avoid environmental damage, whenever possible;

(b) Ensure that relevant decisions are preceded by environmental impact assessments and also take into account the costs of any ecological consequences;

(c) Promote development in accordance with indigenous practices and adopt technologies appropriate to local conditions;

(d) Promote policies aimed at recovering the actual cost of infrastructure services, while at the same time recognizing the need to find suitable approaches (including subsidies) to extend basic services to all households;

(e) Seek joint solutions to environmental problems that affect several localities.

7.42. The dissemination of information from existing programmes should be facilitated and encouraged among interested countries and local institutions.

Means of implementation

(a) Financing and cost evaluation

7.43. The Conference secretariat has estimated most of the costs of implementing the activities of this programme in other chapters. The secretariat estimates the average total annual cost (1993-2000) of technical assistance from the international community grant or concessional terms to be about $50 million. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, *inter alia*, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

7.44. Scientific and technological means within the existing programmes should be coordinated wherever possible and should:

(a) Accelerate research in the area of integrated policies of environmental infrastructure programmes and projects based on cost/benefit analysis and overall environmental impact;

(b) Promote methods of assessing "effective demand", utilizing environment and development data as criteria for selecting technology.

(c) Human resource development and capacity-building

7.45. With the assistance and support of funding agencies, all countries should, as appropriate, undertake training and popular participation programmes aimed at:

(a) Raising awareness of the means, approaches and benefits of the provision of environmental infrastructure facilities, especially among indigenous people, women, low-income groups and the poor;

(b) Developing a cadre of professionals with adequate skills in integrated infrastructural service planning and maintenance of resource-efficient, environmentally sound and socially acceptable systems;

(c) Strengthening the institutional capacity of local authorities and administrators in the integrated provision of adequate infrastructure services in partnership with local communities and the private sector;

(d) Adopting appropriate legal and regulatory instruments, including cross-subsidy arrangements, to extend the benefits of adequate and affordable environmental infrastructure to unserved population groups, especially the poor.

E. Promoting sustainable energy and transport systems in human settlements

Basis for action

7.46. Most of the commercial and non-commercial energy produced today is used in and for human settlements, and a substantial percentage of it is used by the household sector. Developing countries are at present faced with the need to increase their energy production to accelerate development and raise the living standards of their populations, while at the same time reducing energy production costs and energy-related pollution. Increasing the efficiency of energy use to reduce its polluting effects and to promote the use of renewable energies must be a priority in any action taken to protect the urban environment.

7.47. Developed countries, as the largest consumers of energy, are faced with the need for energy planning and management, promoting renewable and alternate sources of energy, and evaluating the life-cycle costs of current systems and practices as a result of which many metropolitan areas are suffering from pervasive air quality problems related to ozone, particulate matters and carbon monoxide. The causes have much to do with technological inadequacies and with an increasing fuel consumption generated by inefficiencies, high demographic and industrial concentrations and a rapid expansion in the number of motor vehicles.

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7.48. Transport accounts for about 30 per cent of commercial energy consumption and for about 60 per cent of total global consumption of liquid petroleum. In developing countries, rapid motorization and insufficient investments in urban-transport planning, traffic management and infrastructure, are creating increasing problems in terms of accidents and injury, health, noise, congestion and loss of productivity similar to those occurring in many developed countries. All of these problems have a severe impact on urban populations, particularly the low-income and no-income groups.

Objectives

7.49. The objectives are to extend the provision of more energy-efficient technology and alternative/renewable energy for human settlements and to reduce negative impacts of energy production and use on human health and on the environment.

Activities

7.50. The principal activities relevant to this programme area are included in chapter 9 (Protection of the atmosphere), programme area B, subprogramme 1 (Energy development, efficiency and consumption) and subprogramme 2 (Transportation).

7.51. A comprehensive approach to human settlements development should include the promotion of sustainable energy development in all countries, as follows:

(a) Developing countries, in particular, should:

(i) Formulate national action programmes to promote and support reafforestation and national forest regeneration with a view to achieving sustained provision of the biomass energy needs of the low-income groups in urban areas and the rural poor, in particular women and children;

(ii) Formulate national action programmes to promote integrated development of energy-saving and renewable energy technologies, particularly for the use of solar, hydro, wind and biomass sources;

(iii) Promote wide dissemination and commercialization of renewable energy technologies through suitable measures, inter alia, fiscal and technology transfer mechanisms;

(iv) Carry out information and training programmes directed at manufacturers and users in order to promote energy-saving techniques and energy-efficient appliances;

(b) International organizations and bilateral donors should:

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(i) Support developing countries in implementing national energy programmes in order to achieve widespread use of energy-saving and renewable energy technologies, particularly the use of solar, wind, biomass and hydro sources;

(ii) Provide access to research and development results to increase energy-use efficiency levels in human settlements.

7.52. Promoting efficient and environmentally sound urban transport systems in all countries should be a comprehensive approach to urban-transport planning and management. To this end, all countries should:

(a) Integrate land-use and transportation planning to encourage development patterns that reduce transport demand;

(b) Adopt urban-transport programmes favouring high-occupancy public transport in countries, as appropriate;

(c) Encourage non-motorized modes of transport by providing safe cycleways and footways in urban and suburban centres in countries, as appropriate;

(d) Devote particular attention to effective traffic management, efficient operation of public transport and maintenance of transport infrastructure;

(e) Promote the exchange of information among countries and representatives of local and metropolitan areas;

(f) Re-evaluate the present consumption and production patterns in order to reduce the use of energy and national resources.

Means of implementation

(a) Financing and cost evaluation

7.53. The Conference secretariat has estimated the costs of implementing the activities of this programme in chapter 9 (Protection of the atmosphere).

(b) Human resource development and capacity-building

7.54. In order to enhance the skills of energy service and transport professionals and institutions, all countries should, as appropriate:

(a) Provide on-the-job and other training of government officials, planners, traffic engineers and managers involved in the energy-service and transport section;

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(b) Raise public awareness of the environmental impacts of transport and travel behaviour through mass media campaigns and support for non-governmental and community initiatives promoting the use of non-motorized transport, shared driving and improved traffic safety measures;

(c) Strengthen regional, national, state/provincial, and private sector institutions that provide education and training on energy service and urban transport planning and management.

F. Promoting human settlement planning and management in disaster-prone areas

Basis for action

7.55. Natural disasters cause loss of life, disruption of economic activities and urban productivity, particularly for highly susceptible low-income groups, and environmental damage, such as loss of fertile agricultural land and contamination of water resources, and can lead to major resettlement of populations. Over the past two decades, they are estimated to have caused some 3 million deaths and affected 800 million people. Global economic losses have been estimated by the Office of the United Nations Disaster Relief Coordinator to be in the range of $30-50 billion per year.

7.56. The General Assembly, in resolution 44/236, proclaimed the 1990s as the International Decade for Natural Disaster Reduction. The goals of the Decade 7/ bear relevance to the objectives of the present programme area.

7.57. In addition, there is an urgent need to address the prevention and reduction of man-made disasters and/or disasters caused by, inter alia, industries, unsafe nuclear power generation and toxic wastes (see chapter 6 of Agenda 21).

Objective

7.58. The objective is to enable all countries, in particular those that are disaster-prone, to mitigate the negative impact of natural and man-made disasters on human settlements, national economies and the environment.

Activities

7.59. Three distinct areas of activity are foreseen under this programme area, namely, the development of a "culture of safety", pre-disaster planning and post-disaster reconstruction.

(a) Developing a culture of safety

7.60. To promote a "culture of safety" in all countries, especially those that are disaster-prone, the following activities should be carried out:

(a) Completing national and local studies on the nature and occurrence of natural disasters, their impact on people and economic activities, the effects of inadequate construction and land use in hazard-prone areas, and the social and economic advantages of adequate pre-disaster planning;

(b) Implementing nationwide and local awareness campaigns through all available media, translating the above knowledge into information easily comprehensible to the general public and to the populations directly exposed to hazards;

(c) Strengthening, and/or developing global, regional, national and local early warning systems to alert populations to impending disasters;

(d) Identifying industrially based environmental disaster areas at the national and international levels and implementing strategies aimed at the rehabilitation of these areas through, inter alia:

(i) Restructuring of the economic activities and promoting new job opportunities in environmentally sound sectors;

(ii) Promoting close collaboration between governmental and local authorities, local communities and non-governmental organizations and private business;

(iii) Developing and enforcing strict environmental control standards.

(b) Developing pre-disaster planning

7.61. Pre-disaster planning should form an integral part of human settlement planning in all countries. The following should be included:

(a) Undertaking complete multi-hazard research into risk and vulnerability of human settlements and settlement infrastructure, including water and sewerage, communication and transportation networks, as one type of risk reduction may increase vulnerability to another (e.g., an earthquake-resistant house made of wood will be more vulnerable to wind storms);

(b) Developing methodologies for determining risk and vulnerability within specific human settlements and incorporating risk and vulnerability reduction into the human settlement planning and management process;

(c) Redirecting inappropriate new development and human settlements to areas not prone to hazards;

(d) Preparing guidelines on location, design and operation of potentially hazardous industries and activities;

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(e) Developing tools (legal, economic etc.) to encourage disaster-sensitive development, including means of ensuring that limitations on development options are not punitive to owners, or incorporate alternative means of compensation;

(f) Further developing and disseminating information on disaster-resistant building materials and construction technologies for buildings and public works in general;

(g) Developing training programmes for contractors and builders on disaster-resistant construction methods. Some programmes should be directed particularly to small enterprises, which build the great majority of housing and other small buildings in the developing countries, as well as to the rural populations, which build their own houses;

(h) Developing training programmes for emergency site managers, non-governmental organizations and community groups which cover all aspects of disaster mitigation, including urban search and rescue, emergency communications, early warning techniques, and pre-disaster planning;

(i) Developing procedures and practices to enable local communities to receive information about hazardous installations or situations in these areas, and facilitate their participation in early warning and disaster abatement and response procedures and plans;

(j) Preparing action plans for the reconstruction of settlements, especially the reconstruction of community life-lines.

(c) Initiating post-disaster reconstruction and rehabilitation planning

7.62. The international community, as a major partner in post-reconstruction and rehabilitation, should ensure that the countries involved derive the greatest benefits from the funds allocated by undertaking the following activities:

(a) Carrying out research on past experiences on the social and economic aspects of post-disaster reconstruction and adopting effective strategies and guidelines for post-disaster reconstruction, with particular focus on development-focused strategies in the allocation of scarce reconstruction resources, and on the opportunities that post-disaster reconstruction provides to introduce sustainable settlement patterns;

(b) Preparing and disseminating international guidelines for adaptation to national and local needs;

(c) Supporting efforts of national Governments to initiate contingency planning, with participation of affected communities, for post-disaster reconstruction and rehabilitation.

Means of implementation

(a) Financing and cost evaluation

7.63. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $50 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, *inter alia*, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

7.64. Scientists and engineers specializing in this field in both developing and developed countries should collaborate with urban and regional planners in order to provide the basic knowledge and means to mitigate losses owing to disasters as well as environmentally inappropriate development.

(c) Human resource development and capacity-building

7.65. Developing countries should conduct training programmes on disaster-resistant construction methods for contractors and builders, who build the majority of housing in the developing countries. This should focus on the small business enterprises, which build the majority of housing in the developing countries.

7.66. Training programmes should be extended to government officials and planners and community and non-governmental organizations to cover all aspects of disaster mitigation, such as early warning techniques, pre-disaster planning and construction, post-disaster construction and rehabilitation.

G. Promoting sustainable construction industry activities

Basis for action

7.67. The activities of the construction sector are vital to the achievement of the national socio-economic development goals of providing shelter, infrastructure and employment. However, they can be a major source of environmental damage through depletion of the natural resource base, degradation of fragile eco-zones, chemical pollution and the use of building materials harmful to human health.

Objectives

7.68. The objectives are, first, to adopt policies and technologies and to exchange information on them in order to enable the construction sector to meet human settlement development goals, while avoiding harmful side-effects on human health and on the biosphere, and, second, to enhance the employment-generation capacity of the construction sector. Governments should work in close collaboration with the private sector in achieving these objectives.

Activities

7.69. All countries should, as appropriate and in accordance with national plans, objectives and priorities:

(a) Establish and strengthen indigenous building materials industry, based, as much as possible, on inputs of locally available natural resources;

(b) Formulate programmes to enhance the utilization of local materials by the construction sector by expanding technical support and incentive schemes for increasing the capabilities and economic viability of small-scale and informal operatives which make use of these materials and traditional construction techniques;

(c) Adopt standards and other regulatory measures which promote the increased use of energy-efficient designs and technologies and sustainable utilization of natural resources in an economically and environmentally appropriate way;

(d) Formulate appropriate land-use policies and introduce planning regulations specially aimed at the protection of eco-sensitive zones against physical disruption by construction and construction-related activities;

(e) Promote the use of labour-intensive construction and maintenance technologies which generate employment in the construction sector for the underemployed labour force found in most large cities, while at the same time promoting the development of skills in the construction sector;

(f) Develop policies and practices to reach the informal sector and self-help housing builders by adopting measures to increase the affordability of building materials on the part of the urban and rural poor, through, *inter alia*, credit schemes and bulk procurement of building materials for sale to small-scale builders and communities.

7.70. All countries should:

(a) Promote the free exchange of information on the entire range of environmental and health aspects of construction, including the development and dissemination of databases on the adverse environmental effects of building materials through the collaborative efforts of the private and public sectors;

(b) Promote the development and dissemination of databases on the adverse environmental and health effects of building materials and introduce legislation and financial incentives to promote recycling of energy-intensive materials in the construction industry and conservation of waste energy in building-materials production methods;

(c) Promote the use of economic instruments, such as product charges, to discourage the use of construction materials and products that create pollution during their life cycle;

(d) Promote information exchange and appropriate technology transfer among all countries, with particular attention to developing countries, for resource management in construction, particularly for non-renewable resources;

(e) Promote research in construction industries and related activities, and establish and strengthen institutions in this sector.

Means of implementation

(a) Financing and cost evaluation

7.71. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $40 billion, including about $4 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, *inter alia*, the specific strategies and programmes Governments decide upon for implementation.

(b) Human resource development and capacity-building

7.72. Developing countries should be assisted by international support and funding agencies in upgrading the technical and managerial capacities of the small entrepreneur and the vocational skills of operatives and supervisors in the building materials industry, using a variety of training methods. These countries should also be assisted in developing programmes to encourage the use of non-waste and clean technologies through appropriate transfer of technology.

7.73. General education programmes should be developed in all countries, as appropriate, to increase builder awareness of available sustainable technologies.

7.74. Local authorities are called upon to play a pioneering role in promoting the increased use of environmentally sound building materials and construction technologies, e.g., by pursuing an innovative procurement policy.

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H. Promoting human resource development and capacity-building for human settlements development

Basis for action

7.75. Most countries, in addition to shortcomings in the availability of specialized expertise in the areas of housing, settlement management, land management, infrastructure, construction, energy, transport, and pre-disaster planning and reconstruction, face three cross-sectoral human resource development and capacity-building shortfalls. First is the absence of an enabling policy environment capable of integrating the resources and activities of the public sector, the private sector and the community, or social sector; second is the weakness of specialized training and research institutions; and third is the insufficient capacity for technical training and assistance for low-income communities, both urban and rural.

Objective

7.76. The objective is to improve human resource development and capacity-building in all countries by enhancing the personal and institutional capacity of all actors, particularly indigenous people and women, involved in human settlement development. In this regard, account should be taken of traditional cultural practices of indigenous people and their relationship to the environment.

Activities

7.77. Specific human resource development and capacity-building activities have been built into each of the programme areas of this chapter. More generally, however, additional steps should be taken to reinforce those activities. In order to do so, all countries, as appropriate, should take the following action:

(a) Strengthening the development of human resources and of capacities of public sector institutions through technical assistance and international cooperation so as to achieve by the year 2000 substantial improvement in the efficiency of governmental activities;

(b) Creating an enabling policy environment supportive of the partnership between the public, private and community sectors;

(c) Providing enhanced training and technical assistance to institutions providing training for technicians, professionals and administrators, and appointed, elected and professional members of local governments and strengthening their capacity to address priority training needs, particularly in regard to social, economic and environmental aspects of human settlements development;

(d) Providing direct assistance for human settlement development at the community level, inter alia, by:

(i) Strengthening and promoting programmes for social mobilization and raising awareness of the potential of women and youth in human settlements activities;

(ii) Facilitating coordination of the activities of women, youth, community groups and non-governmental organizations in human settlements development;

(iii) Promoting research on women's programmes and other groups, and evaluating progress made with a view to identifying bottlenecks and needed assistance;

(e) Promoting the inclusion of integrated environmental management into general local government activities.

7.78. Both international organizations and non-governmental organizations should support the above activities by, inter alia, strengthening subregional training institutions, providing updated training materials and disseminating the results of successful human resource and capacity-building activities, programmes and projects.

Means of implementation

(a) Financing and cost evaluation

7.79. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $65 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

7.80. Both formal training and non-formal types of human resource development and capacity-building programmes should be combined, and use should be made of user-oriented training methods, up-to-date training materials and modern audio-visual communication systems.

Notes

1/ No aggregate figures are available on internal expenditure or official development assistance on human settlements. However, data available in the World Development Report, 1991, for 16 low-income developing countries show that the percentage of central government expenditure on housing, amenities and social security and welfare for 1989 averaged 5.6 per cent, with a high of 15.1 per cent in the case of Sri Lanka, which has embarked on a

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Notes (continued)

vigorous housing programme. In OECD industrialized countries, during the same year, the percentage of central government expenditure on housing, amenities and social security and welfare ranged from a minimum of 29.3 per cent to a maximum of 49.4 per cent, with an average of 39 per cent (World Bank, World Development Report, 1991, World Development Indicators, table 11 (Washington, D.C., 1991)).

2/ See the report of the Director-General for Development and International Economic Cooperation containing preliminary statistical data on operational activities of the United Nations system for 1988 (A/44/324-E/1989/106/Add.4, annex).

3/ World Bank, Annual Report, 1991 (Washington, D.C., 1991).

4/ UNDP, "Reported investment commitments related to UNDP-assisted projects, 1988", table 1, "Sectoral distribution of investment commitment in 1988-1989".

5/ A pilot programme of this type, the City Data Programme (CDP), is already in operation in the United Nations Centre on Human Settlements (Habitat) aimed at the production and dissemination to participating cities of microcomputer application software designed to store, process and retrieve city data for local, national and international exchange and dissemination.

6/ This calls for integrated land-resource management policies, which are also addressed in chapter 10 of Agenda 21 (Integrated approach to planning and management of land resources).

7/ The goals of the International Decade for Natural Disaster Reduction, set out in the annex to General Assembly resolution 44/236, are as follows:

(a) To improve the capacity of each country to mitigate the effects of natural disasters expeditiously and effectively, paying special attention to assisting developing countries in the assessment of disaster damage potential and in the establishment of early warning systems and disaster-resistant structures when and where needed;

(b) To devise appropriate guidelines and strategies for applying existing scientific and technical knowledge, taking into account the cultural and economic diversity among nations;

(c) To foster scientific and engineering endeavours aimed at closing critical gaps in knowledge in order to reduce loss of life and property;

(d) To disseminate existing and new technical information related to measures for the assessment, prediction and mitigation of natural disasters;

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Notes (continued)

(e) To develop measures for the assessment, prediction, prevention and mitigation of natural disasters through programmes of technical assistance and technology transfer, demonstration projects, and education and training, tailored to specific disasters and locations, and to evaluate the effectiveness of those programmes.

Chapter 8

INTEGRATING ENVIRONMENT AND DEVELOPMENT IN DECISION-MAKING

INTRODUCTION

8.1. This chapter contains the following programme areas:

(a) Integrating environment and development at the policy, planning and management levels;

(b) Providing an effective legal and regulatory framework;

(c) Making effective use of economic instruments and market and other incentives;

(d) Establishing systems for integrated environmental and economic accounting.

PROGRAMME AREAS

A. Integrating environment and development at the policy, planning and management levels

Basis for action

8.2. Prevailing systems for decision-making in many countries tend to separate economic, social and environmental factors at the policy, planning and management levels. This influences the actions of all groups in society, including Governments, industry and individuals, and has important implications for the efficiency and sustainability of development. An adjustment or even a fundamental reshaping of decision-making, in the light of country-specific conditions, may be necessary if environment and development is to be put at the centre of economic and political decision-making, in effect achieving a full integration of these factors. In recent years, some Governments have also begun to make significant changes in the institutional structures of government in order to enable more systematic consideration of the environment when decisions are made on economic, social, fiscal, energy, agricultural, transportation, trade and other policies, as well as the implications of policies in these areas for the environment. New forms of dialogue are also being developed for achieving better integration among national and local government, industry, science, environmental groups and the public in the process of developing effective approaches to environment and development. The responsibility for bringing about changes lies with Governments in partnership with the private sector and local authorities, and in collaboration with national, regional and international organizations, including in particular UNEP, UNDP and the World Bank. Exchange of experience between countries can also be significant. National plans, goals and objectives, national rules, regulations and law, and the specific situation in which different countries are placed are the overall framework in which such integration takes place. In this context, it must be borne in mind that environmental standards may pose severe economic and social costs if they are uniformly applied in developing countries.

Objectives

8.3. The overall objective is to improve or restructure the decision-making process so that consideration of socio-economic and environmental issues is fully integrated and a broader range of public participation assured. Recognizing that countries will develop their own priorities in accordance with their prevailing conditions, needs, national plans, policies and programmes, the following objectives are proposed:

(a) To conduct a national review of economic, sectoral and environmental policies, strategies and plans to ensure the progressive integration of environmental and developmental issues;

(b) To strengthen institutional structures to allow the full integration of environmental and developmental issues, at all levels of decision-making;

(c) To develop or improve mechanisms to facilitate the involvement of concerned individuals, groups and organizations in decision-making at all levels;

(d) To establish domestically determined procedures to integrate environment and development issues in decision-making.

Activities

(a) Improving decision-making processes

8.4. The primary need is to integrate environmental and developmental decision-making processes. To do this, Governments should conduct a national review and, where appropriate, improve the processes of decision-making so as to achieve the progressive integration of economic, social and environmental issues in the pursuit of development that is economically efficient, socially equitable and responsible and environmentally sound. Countries will develop their own priorities in accordance with their national plans, policies and programmes for the following activities:

(a) Ensuring the integration of economic, social and environmental considerations in decision-making at all levels and in all ministries;

(b) Adopting a domestically formulated policy framework that reflects a long-term perspective and cross-sectoral approach as the basis for decisions, taking account of the linkages between and within the various political, economic, social and environmental issues involved in the development process;

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(c) Establishing domestically determined ways and means to ensure the coherence of sectoral, economic, social and environmental policies, plans and policy instruments, including fiscal measures and the budget; these mechanisms should apply at various levels and bring together those interested in the development process;

(d) Monitoring and evaluating the development process systematically, conducting regular reviews of the state of human resources development, economic and social conditions and trends, the state of the environment and natural resources; this could be complemented by annual environment and development reviews, with a view to assessing sustainable development achievements by the various sectors and departments of government;

(e) Ensuring transparency of, and accountability for, the environmental implications of economic and sectoral policies;

(f) Ensuring access by the public to relevant information, facilitating the reception of public views and allowing for effective participation.

(b) Improving planning and management systems

8.5. To support a more integrated approach to decision-making, the data systems and analytical methods used to support such decision-making processes may need to be improved. Governments, in collaboration, where appropriate, with national and international organizations, should review the status of the planning and management system and, where necessary, modify and strengthen procedures so as to facilitate the integrated consideration of social, economic and environmental issues. Countries will develop their own priorities in accordance with their national plans, policies and programmes for the following activities:

(a) Improving the use of data and information at all stages of planning and management, making systematic and simultaneous use of social, economic, developmental, ecological and environmental data; analysis should stress interactions and synergisms; a broad range of analytical methods should be encouraged so as to provide various points of view;

(b) Adopting comprehensive analytical procedures for prior and simultaneous assessment of the impacts of decisions, including the impacts within and among the economic, social and environmental spheres; these procedures should extend beyond the project level to policies and programmes; analysis should also include assessment of costs, benefits and risks;

(c) Adopting flexible and integrative planning approaches that allow the consideration of multiple goals and enable adjustment of changing needs; integrative area approaches at the ecosystem or watershed level can assist in this approach;

(d) Adopting integrated management systems, particularly for the management of natural resources; traditional or indigenous methods should be studied and considered wherever they have proved effective; women's traditional roles should not be marginalized as a result of the introduction of new management systems;

(e) Adopting integrated approaches to sustainable development at the regional level, including transboundary areas, subject to the requirements of particular circumstances and needs;

(f) Using policy instruments (legal/regulatory and economic) as a tool for planning and management, seeking incorporation of efficiency criteria in decisions; instruments should be regularly reviewed and adapted to ensure that they continue to be effective;

(g) Delegating planning and management responsibilities to the lowest level of public authority consistent with effective action; in particular the advantages of effective and equitable opportunities for participation by women should be discussed;

(h) Establishing procedures for involving local communities in contingency planning for environmental and industrial accidents, and maintaining an open exchange of information on local hazards.

(c) Data and information

8.6. Countries could develop systems for monitoring and evaluation of progress towards achieving sustainable development by adopting indicators that measure changes across economic, social and environmental dimensions.

(d) Adopting a national strategy for sustainable development

8.7. Governments, in cooperation, where appropriate, with international organizations, should adopt a national strategy for sustainable development based on, inter alia, the implementation of decisions taken at the Conference, particularly in respect of Agenda 21. This strategy should build upon and harmonize the various sectoral economic, social and environmental policies and plans that are operating in the country. The experience gained through existing planning exercises such as national reports for the Conference, national conservation strategies and environment action plans should be fully used and incorporated into a country-driven sustainable development strategy. Its goals should be to ensure socially responsible economic development while protecting the resource base and the environment for the benefit of future generations. It should be developed through the widest possible participation. It should be based on a thorough assessment of the current situation and initiatives.

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Means of implementation

(a) Financing and cost evaluation

8.8. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $50 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, *inter alia*, the specific strategies and programmes Governments decide upon for implementation.

(b) Researching environment and development interactions

8.9. Governments, in collaboration with the national and international scientific community and in cooperation with international organizations, as appropriate, should intensify efforts to clarify the interactions between and within social, economic and environmental considerations. Research should be undertaken with the explicit objective of assisting policy decisions and providing recommendations on improving management practices.

(c) Enhancing education and training

8.10. Countries, in cooperation, where appropriate, with national, regional or international organizations, should ensure that essential human resources exist, or be developed, to undertake the integration of environment and development at various stages of the decision-making and implementation process. To do this, they should improve education and technical training, particularly for women and girls, by including interdisciplinary approaches, as appropriate, in technical, vocational, university and other curricula. They should also undertake systematic training of government personnel, planners and managers on a regular basis, giving priority to the requisite integrative approaches and planning and management techniques that are suited to country-specific conditions.

(d) Promoting public awareness

8.11. Countries, in cooperation with national institutions and groups, the media and the international community, should promote awareness in the public at large, as well as in specialized circles, of the importance of considering environment and development in an integrated manner, and should establish mechanisms for facilitating a direct exchange of information and views with the public. Priority should be given to highlighting the responsibilities and potential contributions of different social groups.

(e) Strengthen national institutional capacity

8.12. Governments, in cooperation, where appropriate, with international organizations, should strengthen national institutional capability and capacity to integrate social, economic, developmental and environmental issues

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at all levels of development decision-making and implementation. Attention should be given to moving away from narrow sectoral approaches, progressing towards full cross-sectoral coordination and cooperation.

B. Providing an effective legal and regulatory framework

Basis for action

8.13. Laws and regulations suited to country-specific conditions are among the most important instruments for transforming environment and development policies into action, not only through "command and control" methods, but also as a normative framework for economic planning and market instruments. Yet, although the volume of legal texts in this field is steadily increasing, much of the law-making in many countries seems to be ad hoc and piecemeal, or has not been endowed with the necessary institutional machinery and authority for enforcement and timely adjustment.

8.14. While there is continuous need for law improvement in all countries, many developing countries have been affected by shortcomings of laws and regulations. To effectively integrate environment and development in the policies and practices of each country, it is essential to develop and implement integrated, enforceable and effective laws and regulations that are based upon sound social, ecological, economic and scientific principles. It is equally critical to develop workable programmes to review and enforce compliance with the laws, regulations and standards that are adopted. Technical support may be needed for many countries to accomplish these goals. Technical cooperation requirements in this field include legal information, advisory services and specialized training and institutional capacity-building.

8.15. The enactment and enforcement of laws and regulations (at the regional, national, state/provincial or local/municipal level) are also essential for the implementation of most international agreements in the field of environment and development, as illustrated by the frequent treaty obligation to report on legislative measures. The survey of existing agreements undertaken in the context of conference preparations has indicated problems of compliance in this respect, and the need for improved national implementation and, where appropriate, related technical assistance. In developing their national priorities, countries should take account of their international obligations.

Objectives

8.16. The overall objective is to promote, in the light of country-specific conditions, the integration of environment and development policies through appropriate legal and regulatory policies, instruments and enforcement mechanisms at the national, state, provincial and local level. Recognizing that countries will develop their own priorities in accordance with their needs and national and, where appropriate, regional plans, policies and programmes, the following objectives are proposed:

(a) To disseminate information on effective legal and regulatory innovations in the field of environment and development, including appropriate instruments and compliance incentives, with a view to encouraging their wider use and adoption at the national, state, provincial and local level;

(b) To support countries that request it in their national efforts to modernize and strengthen the policy and legal framework of governance for sustainable development, having due regard for local social values and infrastructures;

(c) To encourage the development and implementation of national, state, provincial and local programmes that assess and promote compliance and respond appropriately to non-compliance.

Activities

(a) Making laws and regulations more effective

8.17. Governments, with the support, where appropriate, of competent international organizations, should regularly assess the laws and regulations enacted and the related institutional/administrative machinery established at the national/state and local/municipal level in the field of environment and sustainable development, with a view to rendering them effective in practice. Programmes for this purpose could include the promotion of public awareness, preparation and distribution of guidance material, and specialized training, including workshops, seminars, education programmes and conferences, for public officials who design, implement, monitor and enforce laws and regulations.

(b) Establishing judicial and administrative procedures

8.18. Governments and legislators, with the support, where appropriate, of competent international organizations, should establish judicial and administrative procedures for legal redress and remedy of actions affecting environment and development that may be unlawful or infringe on rights under the law, and should provide access to individuals, groups and organizations with a recognized legal interest.

(c) Providing legal reference and support services

8.19. Competent intergovernmental and non-governmental organizations could cooperate to provide Governments and legislators, upon request, with an integrated programme of environment and development law (sustainable development law) services, carefully adapted to the specific requirements of the recipient legal and administrative systems. Such systems could usefully include assistance in the preparation of comprehensive inventories and reviews of national legal systems. Past experience has demonstrated the usefulness of combining specialized legal information services with legal expert advice. Within the United Nations system, closer cooperation among all agencies concerned would avoid duplication of databases and facilitate division of

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labour. These agencies could examine the possibility and merit of performing reviews of selected national legal systems.

(d) Establishing a cooperative training network for sustainable development law

8.20. Competent international and academic institutions could, within agreed frameworks, cooperate to provide, especially for trainees from developing countries, postgraduate programmes and in-service training facilities in environment and development law. Such training should address both the effective application and the progressive improvement of applicable laws, the related skills of negotiating, drafting and mediation, and the training of trainers. Intergovernmental and non-governmental organizations already active in this field could cooperate with related university programmes to harmonize curriculum planning and to offer an optimal range of options to interested Governments and potential sponsors.

(e) Developing effective national programmes for reviewing and enforcing compliance with national, state, provincial and local laws on environment and development

8.21. Each country should develop integrated strategies to maximize compliance with its laws and regulations relating to sustainable development, with assistance from international organizations and other countries as appropriate. The strategies could include:

(a) Enforceable, effective laws, regulations and standards that are based on sound economic, social and environmental principles and appropriate risk assessment, incorporating sanctions designed to punish violations, obtain redress and deter future violations;

(b) Mechanisms for promoting compliance;

(c) Institutional capacity for collecting compliance data, regularly reviewing compliance, detecting violations, establishing enforcement priorities, undertaking effective enforcement, and conducting periodic evaluations of the effectiveness of compliance and enforcement programmes;

(d) Mechanisms for appropriate involvement of individuals and groups in the development and enforcement of laws and regulations on environment and development.

(f) National monitoring of legal follow-up to international instruments

8.22. Contracting parties to international agreements, in consultation with the appropriate secretariats of relevant international conventions as appropriate, should improve practices and procedures for collecting information on legal and regulatory measures taken. Contracting parties to international agreements could undertake sample surveys of domestic follow-up action subject to agreement by the sovereign States concerned.

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Means of implementation

(a) Financing and cost evaluation

8.23. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $6 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

8.24. The programme relies essentially on a continuation of ongoing work for legal data collection, translation and assessment. Closer cooperation between existing databases may be expected to lead to better division of labour (e.g., in geographical coverage of national legislative gazettes and other reference sources) and to improved standardization and compatibility of data, as appropriate.

(c) Human resource development

8.25. Participation in training is expected to benefit practitioners from developing countries and to enhance training opportunities for women. Demand for this type of postgraduate and in-service training is known to be high. The seminars, workshops and conferences on review and enforcement that have been held to date have been very successful and well attended. The purpose of these efforts is to develop resources (both human and institutional) to design and implement effective programmes to continuously review and enforce national and local laws, regulations and standards on sustainable development.

(d) Strengthening legal and institutional capacity

8.26. A major part of the programme should be oriented towards improving the legal-institutional capacities of countries to cope with national problems of governance and effective law-making and law-applying in the field of environment and sustainable development. Regional centres of excellence could be designated and supported to build up specialized databases and training facilities for linguistic/cultural groups of legal systems.

C. Making effective use of economic instruments and market and other incentives

Basis for action

8.27. Environmental law and regulation are important but cannot alone be expected to deal with the problems of environment and development. Prices, markets and governmental fiscal and economic policies also play a complementary role in shaping attitudes and behaviour towards the environment.

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8.28. During the past several years, many Governments, primarily in industrialized countries but also in Central and Eastern Europe and in developing countries, have been making increasing use of economic approaches, including those that are market-oriented. Examples include the polluter-pays principle and the more recent natural-resource-user-pays concept.

8.29. Within a supportive international and national economic context and given the necessary legal and regulatory framework, economic and market-oriented approaches can in many cases enhance capacity to deal with the issues of environment and development. This would be achieved by providing cost-effective solutions, applying integrated pollution prevention control, promoting technological innovation and influencing environmental behaviour, as well as providing financial resources to meet sustainable development objectives.

8.30. What is needed is an appropriate effort to explore and make more effective and widespread use of economic and market-oriented approaches within a broad framework of development policies, law and regulation suited to country-specific conditions as part of a general transition to economic and environmental policies that are supportive and mutually reinforcing.

Objectives

8.31. Recognizing that countries will develop their own priorities in accordance with their needs and national plans, policies and programmes, the challenge is to achieve significant progress in the years ahead in meeting three fundamental objectives:

(a) To incorporate environmental costs in the decisions of producers and consumers, to reverse the tendency to treat the environment as a "free good" and to pass these costs on to other parts of society, other countries, or to future generations;

(b) To move more fully towards integration of social and environmental costs into economic activities, so that prices will appropriately reflect the relative scarcity and total value of resources and contribute towards the prevention of environmental degradation;

(c) To include, wherever appropriate, the use of market principles in the framing of economic instruments and policies to pursue sustainable development.

Activities

(a) Improving or reorienting governmental policies

8.32. In the near term, Governments should consider gradually building on experience with economic instruments and market mechanisms by undertaking to reorient their policies, keeping in mind national plans, priorities and objectives, in order to:

(a) Establish effective combinations of economic, regulatory and voluntary (self-regulatory) approaches;

(b) Remove or reduce those subsidies that do not conform with sustainable development objectives;

(c) Reform or recast existing structures of economic and fiscal incentives to meet environment and development objectives;

(d) Establish a policy framework that encourages the creation of new markets in pollution control and environmentally sounder resource management;

(e) Move towards pricing consistent with sustainable development objectives.

8.33. In particular, Governments should explore, in cooperation with business and industry, as appropriate, how effective use can be made of economic instruments and market mechanisms in the following areas:

(a) Issues related to energy, transportation, agriculture and forestry, water, wastes, health, tourism and tertiary services;

(b) Global and transboundary issues;

(c) The development and introduction of environmentally sound technology and its adaptation, diffusion and transfer to developing countries in conformity with chapter 34.

(b) Taking account of the particular circumstances of developing countries and countries with economies in transition

8.34. A special effort should be made to develop applications of the use of economic instruments and market mechanisms geared to the particular needs of developing countries and countries with economies in transition, with the assistance of regional and international economic and environmental organizations and, as appropriate, non-governmental research institutes, by:

(a) Providing technical support to those countries on issues relating to the application of economic instruments and market mechanisms;

(b) Encouraging regional seminars and, possibly, the development of regional centres of expertise.

(c) Creating an inventory of effective uses of economic instruments and market mechanisms

8.35. Given the recognition that the use of economic instruments and market mechanisms is relatively recent, exchange of information about different countries' experiences with such approaches should be actively encouraged. In this regard, Governments should encourage the use of existing means of information exchange to look at effective uses of economic instruments.

(d) Increasing understanding of the role of economic instruments and market mechanisms

8.36. Governments should encourage research and analysis on effective uses of economic instruments and incentives with the assistance and support of regional and international economic and environmental organizations, as well as non-governmental research institutes, with a focus on such key issues as:

(a) The role of environmental taxation suited to national conditions;

(b) The implications of economic instruments and incentives for competitiveness and international trade, and potential needs for appropriate future international cooperation and coordination;

(c) The possible social and distributive implications of using various instruments.

(e) Establishing a process for focusing on pricing

8.37. The theoretical advantages of using pricing policies, where appropriate, need to be better understood, and accompanied by greater understanding of what it means to take significant steps in this direction. Processes should therefore be initiated, in cooperation with business, industry, large enterprises, transnational corporations, as well as other social groups, as appropriate, at both the national and international levels, to examine:

(a) The practical implications of moving towards greater reliance on pricing that internalize environmental costs appropriate to help achieve sustainable development objectives;

(b) The implications for resource pricing in the case of resource-exporting countries, including the implications of such pricing policies for developing countries;

(c) The methodologies used in valuing environmental costs.

(f) Enhancing understanding of sustainable development economics

8.38. Increased interest in economic instruments, including market mechanisms, also requires a concerted effort to improve understanding of sustainable development economics by:

(a) Encouraging institutions of higher learning to review their curricula and strengthen studies in sustainable development economics;

(b) Encouraging regional and international economic organizations and non-governmental research institutes with expertise in this area to provide training sessions and seminars for government officials;

(c) Encouraging business and industry, including large industrial enterprises and transnational corporations with expertise in environmental matters, to organize training programmes for the private sector and other groups.

Means of implementation

8.39. This programme involves adjustments or reorientation of policies on the part of Governments. It also involves international and regional economic and environmental organizations and agencies with expertise in this area, including transnational corporations.

(a) Financing and cost evaluation

8.40. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $5 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

D. Establishing systems for integrated environmental and economic accounting

Basis for action

8.41. A first step towards the integration of sustainability into economic management is the establishment of better measurement of the crucial role of the environment as a source of natural capital and as a sink for by-products generated during the production of man-made capital and other human activities. As sustainable development encompasses social, economic and environmental dimensions, it is also important that national accounting procedures are not restricted to measuring the production of goods and services that are conventionally remunerated. A common framework needs to be developed whereby the contributions made by all sectors and activities of society, that are not included in the conventional national accounts, are included, to the extent consistent with sound theory and practicability, in satellite accounts. A programme to develop national systems of integrated environmental and economic accounting in all countries is proposed.

Objectives

8.42. The main objective is to expand existing systems of national economic accounts in order to integrate environment and social dimensions in the accounting framework, including at least satellite systems of accounts for natural resources in all member States. The resulting systems of integrated environmental and economic accounting (IEEA) to be established in all member States at the earliest date should be seen as a complement to, rather than a substitute for, traditional national accounting practices for the foreseeable future. IEEAs would be designed to play an integral part in the national development decision-making process. National accounting agencies should work in close collaboration with national environmental statistics as well as the geographic and natural resource departments. The definition of economically active could be expanded to include people performing productive but unpaid tasks in all countries. This would enable their contribution to be adequately measured and taken into account in decision-making.

Activities

(a) Strengthening international cooperation

8.43. The Statistical Office of the United Nations Secretariat should:

(a) Make available to all member States the methodologies contained in the SNA Handbook on Integrated Environmental and Economic Accounting;

(b) In collaboration with other relevant United Nations organizations, further develop, test, refine and then standardize the provisional concepts and methods such as those proposed by the SNA Handbook, keeping member States informed of the status of the work throughout this process;

(c) Coordinate, in close cooperation with other international organizations, the training of national accountants, environmental statisticians and national technical staff in small groups for the establishment, adaptation and development of national IEEAs.

8.44. The Department of Economic and Social Development of the United Nations Secretariat, in close collaboration with other relevant United Nations organizations, should:

(a) Support, in all member States, the utilization of sustainable development indicators in national economic and social planning and decision-making practices, with a view to ensuring that IEEAs are usefully integrated in economic development planning at the national level;

(b) Promote improved environmental and economic and social data collection.

(b) Strengthening national accounting systems

8.45. At the national level, the programme could be adopted mainly by the agencies dealing with national accounts, in close cooperation with environmental statistics and natural resource departments, with a view to assisting national economic analysts and decision makers in charge of national economic planning. National institutions should play a crucial role not only as the depositary of the system but also in its adaptation, establishment and continuous use. Unpaid productive work such as domestic work and child care should be included, where appropriate, in satellite national accounts and

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economic statistics. Time-use surveys could be a first step in the process of developing these satellite accounts.

(c) Establishing an assessment process

8.46. At the international level, the Statistical Commission should assemble and review experience and advise member States on technical and methodological issues related to the further development and implementation of IEEAs in member States.

8.47. Governments should seek to identify and consider measures to correct price distortions arising from environmental programmes affecting land, water, energy and other natural resources.

8.48. Governments should encourage corporations:

(a) To provide relevant environmental information through transparent reporting to shareholders, creditors, employees, governmental authorities, consumers and the public;

(b) To develop and implement methods and rules for accounting for sustaining development.

(d) Strengthening data and information collection

8.49. National Governments could consider implementing the necessary enhancement in data collection to set in place national IEEAs with a view to contributing pragmatically to sound economic management. Major efforts should be made to augment the capacity to collect and analyse environmental data and information and to integrate it with economic data, including gender disaggregated data. Efforts should also be made to develop physical environmental accounts. International donor agencies should consider financing the development of intersectoral data banks to help ensure that national planning for sustainable development is based on precise, reliable and effective information and is suited to national conditions.

(e) Strengthening technical cooperation

8.50. The Statistical Office of the United Nations Secretariat, in close collaboration with relevant United Nations organizations, should strengthen existing mechanisms for technical cooperation among countries. This should also include exchange of experience in the establishment of IEEAs, particularly in connection with the valuation of non-marketed natural resources and standardization in data collection. The cooperation of business and industry, including large industrial enterprises and transnational corporations with experience in valuation of such resources, should also be sought.

Means of implementation

(a) Financing and cost evaluation

8.51. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $2 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Strengthening institutions

8.52. To ensure the application of IEEAs:

(a) National institutions in developing countries could be strengthened to ensure the effective integration of environment and development at the planning and decision-making levels;

(b) The Statistical Office should provide the necessary technical support to member States, in close collaboration with the assessment process to be established by the Statistical Commission; the Statistical Office should provide appropriate support for establishing IEEAs, in collaboration with relevant United Nations agencies.

(c) Enhancing the use of information technology

8.53. Guidelines and mechanisms could be developed and agreed upon for the adaptation and diffusion of information technologies to developing countries. State-of-the-art data management technologies should be adopted for the most efficient and widespread use of IEEAs.

(d) Strengthening national capacity

8.54. Governments, with the support of the international community, should strengthen national institutional capacity to collect, store, organize, assess and use data in decision-making. Training in all areas related to the establishment of IEEAs, and at all levels, will be required, especially in developing countries. This should include technical training of those involved in economic and environmental analysis, data collection and national accounting, as well as training decision makers to use such information in a pragmatic and appropriate way.
